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**Architectural Bamboo Plywood  
 Edge and Flat Grains in Single and  
 Cross-Ply Laminations**



**Master Format 04: Section 06 42 00**

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NOTES TO SPECIFIER:

TO VERIFY THIS IS THE MOST CURRENT VERSION VISIT [WWW.PLYBOO.COM](http://WWW.PLYBOO.COM). THIS SPECIFICATION SECTION IS INTENDED TO ASSIST DESIGN PROFESSIONALS IN SPECIFYING ARCHITECTURAL BAMBOO PLYWOOD FOR PANELING, CASEWORK, DOORS AND SIMILAR ARCHITECTURAL WOODWORK.

SAMPLE LANGUAGE IS PROVIDED FOR APPLICABLE ARTICLE FOLLOWING THE CONSTRUCTION SPECIFICATION INSTITUTE SECTION FORMAT (VERSION 04). THE SAMPLE LANGUAGE SHOULD BE EDITED ACCORDINGLY TO FIT EACH DESIGN FIRM SPECIFICATIONS AND THE SPECIFIC PROJECT APPLICATION.

THIS PRODUCT SPECIFICATION ASSUMES THE PROJECT MANUAL WILL CONTAIN COMPLETE DIVISION 1 DOCUMENTS INCLUDING 013300 –SUBMITTAL PROCEDURES, 016000 –PRODUCT REQUIREMENTS, 016200 –PRODUCT OPTIONS, 017700 –CLOSEOUT PROCEDURES. IF THE PROJECT MANUAL DOES NOT CONTAIN THESE SECTIONS, ADDITIONAL INFORMATION MAY BE INCLUDED UNDER THE APPROPRIATE ARTICLES.

OPTIONAL ITEMS REQUIRING SELECTION BY THE SPECIFIER ARE ENCLOSED WITH BRACKETS, E.G. [35] [40] [45]. MAKE APPROPRIATE SELECTIONS AND DELETE OTHERS.

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**PART 1 – GENERAL**

1.01 Summary

A. Section Includes: Unfinished [Flat Grain] [Vertical Grain] [Edge Grain] [Cross-Ply] and finished bamboo panels installed as prescribed by fabricator, conformance to FSC® (100% FSC) and conformance to ASTM D6007 for Ultra Low-Emitting Formaldehyde. (IEQ 4.4).

B. Plyboo™ Architectural Bamboo Panel qualify for consideration for IECQc4.4 – Low-Emitting Materials; MRc6: Rapidly Renewable Materials; and, MRc7 – Certified Wood under the LEED™ Rating System.

1.02 SUBMITTALS

- A. Submit the follow items in accordance with 013300, including:
1. Product Data
  2. Specification sheet.
  2. Material Safety Data Sheet (MSDS)
  3. Forest Stewardship Council Chain-of-Custody #FSC\*CO12079
  4. Proof of supplier legal right to provide product
  5. Shop Drawings
  6. Samples with manufacturer label.

1.03 QUALITY ASSURANCE

A. Qualifications:

- 1. Minimum 15 years' experience continuously manufacturing bamboo panels
- 2. Quality Standards:
  - a. American National Standards Institute/Hardwood Plywood and Veneer Association
  - b. Test reports including an electronic copy of certified laboratory reports submitted on Laboratory letterhead.

B. Pre-Installation Conference in accordance with Section 013119 – Project Meetings.

1.04 DELIVERY, STORAGE AND HANDLING

A. Panels are to be delivery to project site in original packaging in advance of installation to allow sufficient acclimatization to site conditions.

B. Panels must be stored in original packaging in conditioned space where HVAC systems are operation and controlling storage site temperature and humidity.

1.05 WARRANTY

A. Warranty for Plyboo bamboo panels: 5 years. Go to [www.plyboo.com](http://www.plyboo.com) for full and current warranty language.

**PART 2 – PRODUCTS**

2.01 MANUFACTURER:

A, Smith & Fong Company, 475 Sixth Street, San Francisco, CA 94104; Telephone 415-896-0577; Toll Free 866-835-9859; FAX 415-896-0583; Website: [www.plyboo.com](http://www.plyboo.com); Email: [sales@plyboo.com](mailto:sales@plyboo.com)

B. Unfinished Bamboo Architectural Panels

- 1. Amber Edge, Amber Flat Grain, Natural Edge Grain, Natural Flat Grain
- 2. Forty-eight inch (1219.2 mm) by ninety-six inch (2438.4 mm) panels
- 3. One inch (25.4 mm), three-quarter inch (19.05 mm), one-half inch (12.7 mm), one-quarter inch (6.35 mm) thickness
- 4. Ultra Low Emitting (ULEF) laboratory certified
- 5. FSC Certified (100% FSC), by request
- 6. Flat-line finished, 0 VOC fire retardant, finished one or two sides

C. Substitutions: Not Permitted.

2.02 MATERIALS

A. Plyboo™ Architectural Bamboo Plywood

- 1. Species: Moso (Phyllostachys Pubescens) bamboo
- 2. 100% bamboo
- 3. Sanded to 180 grit
- 4. Forest Stewardship Council (FWSO) certified
- 5. Unfinished or finished (by specification)

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 SELECT APPROPRIATE MATERIALS TO SUIT PROJECT REQUIREMENTS. DELETE THOSE NOT USED.  
 FABRICATION ARTICLE OR SHOP DRAWINGS MYUST CLEDARLY IDENTIFY SPECIFIC USES. GO TO  
<http://www.plyboo.com> FOR AVAILABLE FACE DIMENSIONS.  
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- 5. One inch (1") (25.4 mm) thick 3-ply cross lamination
  - a. [amber edge grain] [amber flat grain] [natural edge grain] [natural flat grain]
  - b. [FSC-certified; 100 FSC]
- 6. Three-quarter inch (3/4") (19.05 mm) thick [3-ply] [1-ply]
  - a. [amber edge grain] [amber flat grain] [natural edge grain] [natural flat grain]
  - b. [FSC-certified; 100 FSC]

7. One-half inch (1/2") (12.7 mm) thick 3-ply cross lamination
    - a. [amber edge grain] [amber flat grain] [natural edge grain] [natural flat grain]
    - b. [FSC-certified; 100 FSC]
  8. One quarter-inch (1/4") (6.35 mm) thick [3-ply] [1-ply]
    - a. [amber edge grain] [amber flat grain] [natural edge grain] [natural flat grain]
    - b. [FSC-certified; 100 FSC]
  9. Finished [one side] [two sides]
- B. Physical/Mechanical Properties
1. ASTM E84: Surface Burning, Class C
  2. ASTM D1037
    - a. Dimensional Stability (AR to 20% RH)
      - i. Linear Expansion: 3-ply: Parallel -0.07%/Perpendicular -0.09%; 1-ply: Parallel -0.40%/ Perpendicular -0.10%
      - ii. Thickness Swell (AR to 20%RH): 3-ply -0.39%; 1-ply -0.13%
      - iii. Screw Hold (face/back/edge 1/edge 2): 3-ply 1009 lbs. / 681 lbs. /361 lbs. /670 lbs. (avg); 1-ply 261 lbs. / 233 lbs. / 513 lbs. / 636 lbs. (avg)
    - b. ASTM D3043 Method D: Flexural Strength
      - i. Density: 3-ply 40 lbs/ft<sup>3</sup>; 1-ply 36 lbs/ft<sup>3</sup>
      - ii. MOE/ MOR (parallel): 3-ply 148,000 psi/ 9,110 psi; 1-ply 179,000 psi/ 11,370 psi
    - c. ASTM D3500 Tensile Strength (parallel), ASTM 1037 Tensile Strength (perpendicular): Load 3-ply 892 lbs. (avg)/ 1,536 lbs. (avg); 1-ply 1,700 lbs. (avg)/ 642 lbs. (avg); Strength: 3-ply 3,497 psi (avg)/ 1024 psi (avg); 1-ply 7,535 psi (avg)/ 428 psi (avg)
    - d. ASTM D4442 Moisture Content: 3-ply 6% - 9% (avg); 1-ply 6% - 9% (avg)
    - e. ASTM D6007: Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products Using a Small-Scale Chamber: 3/4-inch (19.05 mm) 1-ply edge grain = 0.004ppm; 3/4-inch (19.05 mm) = 0.004ppm

### PART 3 – EXECUTION

#### 3.01 EXAMINATION

- A. Examine substrates upon which panels will be installed and conditions are correct.
1. Verify that substrate is clean, dry and free of contaminates.
  2. Verify that HVAC system is operating properly and maintaining proper occupancy-level temperature and humidity conditions.
  3. Coordinate with responsible party to correct unsatisfactory conditions.
  4. Fabricator or installer shall inspect products upon arrival, inspect for any freight damage, confirm condition and examine to determine it matches the work order.

#### 3.02 PREPARATION

- A. If panels are to be stored prior to fabrication or installation:
1. Leave in protective packaging and stack horizontally.
  2. If panels need to be acclimated, unbag, stack horizontally with pacers to allow circulation

#### 3.03 INSTALLTION

- A. Install bamboo panels in accordance with manufacturer's installation guidelines.

#### 3.04 CLEANING

- A. Remove all debris left from installation; vacuum; leave space in clean condition.

#### 3.05 PROTECTION

- A. Cover with suitable covering. Do not use a non-breathable sheet or film. Maintain covering throughout remainder of construction.

END OF PRODUCT SPECIFICATION