



**PRODUCT SPECIFICATION
DURAPALM® COCONUT & SUGAR PALM PLYWOOD
FLAT GRAIN, EDGE GRAIN, DECO EDGE GRAIN
ZERO-FORMALDEHYDE ADHESIVE
IN CSI 2-PART MASTERFORMAT 4.0**

Smith & Fong Company
475 – 6th Street
San Francisco, CA 94103

Phone: (415)896-0577
Toll Free: (866) 835-9859
Fax: (415)896-0583

Website: www.plyboo.com
E-mail: SALES@PLYBOO.COM

MF 2010 Section 06 42 00 Wood Paneling

GENERAL NOTES TO SPECIFIER:

THIS SPECIFICATION SECTION HAS BEEN PREPARED TO ASSIST DESIGN PROFESSIONALS IN THE PREPARATION OF PROJECT OR OFFICE MASTER SPECIFICATIONS. IT FOLLOWS GUIDELINES ESTABLISHED BY THE CONSTRUCTION SPECIFICATIONS INSTITUTE, AND THEREFORE MAY BE USED WITH MOST MASTER SPECIFICATION SYSTEMS WITH MINOR EDITING.

SAMPLE LANGUAGE IS PROVIDED FOR APPLICABLE ARTICLES IN

PART 1–GENERAL, PART 2–PRODUCTS,

PART 3–EXECUTION, FOLLOWING THE CONSTRUCTION SPECIFICATION INSTITUTE'S *SECTIONFORMAT 4.0*. BECAUSE OF THE VARIATION IN SPECIFICATION SYSTEMS CURRENTLY IN USE, ARTICLE AND PARAGRAPH NUMBERS AND TITLES MAY DIFFER SOMEWHAT THAN PRESENTED HEREIN. THE SAMPLE LANGUAGE SHOULD BE EDITED ACCORDINGLY TO FIT EACH FIRM'S SPECIFICATIONS.

ARTICLES AND PARAGRAPHS OF THIS PRODUCT SPECIFICATION ASSUME THE PROJECT MANUAL WILL CONTAIN COMPLETE DIVISION 1 DOCUMENTS INCLUDING 01 25 13–PRODUCT SUBSTITUTION PROCEDURES, SECTIONS 01 33 00–SUBMITTAL PROCEDURES, 01 62 00–PRODUCT OPTIONS, 01 66 00–PRODUCT STORAGE AND HANDLING REQUIREMENTS, 01 74 00–CLEANING AND WASTE MANAGEMENT, 01 77 00–CLOSEOUT PROCEDURES, AND 01 78 00–CLOSEOUT SUBMITTALS. CLOSE COORDINATION WITH DIVISION 1 SECTIONS IS REQUIRED. IF THE PROJECT MANUAL DOES NOT CONTAIN THESE SECTIONS, ADDITIONAL INFORMATION MAY BE INCLUDED UNDER THE APPROPRIATE ARTICLES.

NOTES TO THE SPECIFIER ARE IN ALL UPPER CASE TEXT AND ARE CONTAINED WITHIN ROWS OF ASTERISKS.

HIGHLIGHTED TEXT AND NOTES RELATE TO GREEN BUILDING RATING SYSTEMS (LEED®, GREEN GLOBES®, OTHER INTERNATIONAL GREEN BUILDING CODES, LOCAL GREEN BUILDING CODES) AND CAN BE DELETED IF THE PROJECT IS NOT INTENDED TO ATTAIN A GREEN BUILDING RATING STANDARD.

OPTIONAL ITEMS REQUIRING SELECTION BY THE SPECIFIER ARE ENCLOSED WITHIN BRACKETS, E.G. [35] [40] [45]. MAKE APPROPRIATE SELECTIONS AND DELETE OTHERS.
SPECIFIER NOTE: COCONUT PALM AND SUGAR PALM ARE NOT CONSIDERED WOOD PRODUCTS.

SECTION 06 42 00
Wood Paneling

PART 1 - GENERAL

1.01 SUMMARY/DESCRIPTION

- A. DuraPalm coconut and sugar palm plywood is manufactured from reclaimed palm trees that are no longer commercially viable and is manufactured with no added formaldehyde.

Palm plywood can be used in both commercial and residential environments for paneling, fixtures, cabinetry, and furniture applications. Durapalm products can be cut and laminated using conventional equipment and adhesives and sands and finishes like wood panel products.

- B. RELATED SECTIONS

- 1. Section 06 22 00 – Millwork
- 2. Section 06 41 13 – Wood-Veneer-Faced Architectural Cabinets
- 3. Section 06 42 16 – Flush Wood Paneling
- 4. Section 01 04 00 -- Submittals
- 5. Section 01 35 63 – Sustainability Certification Project Requirements

1.02 REFERENCES

- A. ASTM - American Society for Testing and Materials International.

- 1. ASTM E 84, Standard Test Method for Surface Burning Characteristics of Building Materials.
- 2. ASTM D1037: Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
- 3. ASTM D3043 Method D, Tensile Strength (MOE/MOR)
- 4. ASTM D3500: Tensile Strength Parallel
- 5. ASTM D5116-06: **California Section 01350**; Standard Guide for Small-Scale Environment Chamber Determinations of Organic Emissions from Indoor Materials/Products.
[Guidelines set by the California Department of Health Services (CDHS) Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environment Chambers (CA/DHS/EHLB/R-174, 2004; also known as, chamber testing portion of CA Section 01350)]

- B. Green Building Rating Systems:

- 1. LEED® -- Leadership in Energy & Environmental Design
- 2. UKGBC – United Kingdom Green Building Council
- 3. Green Globes® -- Building Certification
- 4. BREEM – BRE Environmental Assessment Method

- C. Green building rating system guidelines: [no added urea formaldehyde], [low-emitting].

- D. American National Standards Institute/Hardwood Plywood and Veneer Association

1.03 QUALITY ASSURANCE

- A. Qualifications

- 1. MANUFACTURER:

DuraPalm Coconut and Sugar Plywood Manufacturer’s Qualifications:

- a. Minimum ten (10) years continuous experience producing palm plywood.
- b. Materials other than those listed from non-approved manufacturers will not be accepted.

Performance Testing:

- a. DuraPalm coconut and sugar palm must meet or exceed the specified ASTM physical property performance requirements.

1.04 SUBMITTALS

Submit under the provisions of Section 00 62 11, Submittal Transmittal Form.

- A. Specification:
 - 1. Submit palm plywood specification sheets and independent laboratory test results for CA 01350.
- B. Samples:
 - 1. Submit [#] 6-inch (152 mm) samples of palm plywood material in as specified.
- C. Quality Assurance Submittals / Certificates
 - 1. Submit Proof of Manufacturer Qualifications.
 - 2. Submit LEED submittals for IEQc4.4 credit contributions
 - 3. IEQc4.4, Low-Emitting Materials Composite Wood and Agrifiber Products (no added formaldehyde) [CA Section 01350 tested]
 - 4. Submit independent laboratory results for CA 01350 testing
 - 5. Submit independent laboratory results for Screw Hold testing for plywood
 - 6. Submit Maintenance Guidelines as requested by Specifier
 - a. MSDS data
 - b. HVAC temperature and humidity requirements
 - 7. Submit Smith & Fong plywood product warranty

1.05 WORKING CONDITIONS, DELIVERY, STORAGE AND HANDLING

- A. Before working with palm panels, check moisture content. Acclimation may be necessary. Take into consideration the environment and the application at the final installation point.
- B. When acclimating, lay panels flat. Do NOT lie on concrete floor or stand against a wall. Sticker between panels and weight down top panel.
- C. See Working With DuraPalm Plywood document at http://www.plyboo.com/sites/all/files/downloads/working_with_durapalm.pdf

1.06 WARRANTY

- A. Smith & Fong warrants that products sold under this warranty are at the time of sale, free of defects in material and manufacture. The full warranty is available at <http://www.plyboo.com/downloads/smith-fong-plywood-warranty>.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Acceptable Manufacturer: Smith & Fong Company, which is located at 475 Sixth Street, San Francisco, CA 94103; Toll Free Tel: (866) 835-9859; Email: sales@plyboo.com; Web: www.plyboo.com
- B. Substitutions: Not permitted.
- C. Requests for substitution will be considered in accordance with provisions of Section 00 42 25.

2.02 MATERIALS

A. DuraPalm Plywood

- 1. Species:
 - a. Coconut Palm (Cocas Nucifera)
 - b. Sugar Palm (Arenga Pinnata)

2. Manufactured without added formaldehyde

INCLUDE THE FOLLOWING SUBPARAGRAPH IF PRODUCTS ARE USED FOR WALL OR CEILING FINISHES PURSUANT TO IBC SECTION 803.

3. Fire Resistance Classification: [Class B]

- a. Test surface burning characteristics in accordance with ASTM E 84

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 SELECT APPROPRIATE TYPE(S) BELOW TO SUIT PROJECT REQUIREMENTS. DELETE THOSE NOT USED. FABRICATION ARTICLE OR DRAWINGS MUST CLEARLY IDENTIFY SPECIFIC USES.
 PRODUCTS: GO TO <http://www.plyboo.com> FOR AVAILABLE FACE DIMENSIONS

4. Type:
 - a. Coconut Palm: 3/4 inch thick, 3-ply [flat grain] [edge grain]
 - b. Coconut Palm: 1 inch thick, 1-ply [edge grain]
 - c. Sugar Palm: 3/4 inch thick, 3-ply [deco edge grain]

5. Physical Mechanical Properties:
 - a. ASTM E 84 surface burning: Class B
 - b. ASTM D 1037 Dimensional Stability: (50% to 20% RH / Moisture Content AR 8.35%)
 - i. Linear Expansion: parallel -0.09%; perpendicular -0.04%
 - ii. Thickness Swell: -0.82%
 - c. ASTM D 1037 Dimensional Stability: (50% to 90% RH / Moisture Content AR 8.35%)
 - i. Linear Expansion: parallel 0.09%; perpendicular 0.10%
 - ii. Thickness Swell: 2.60%
 - d. ASTM D1037 Screw Hold (face/back/edge1/edge2)
 - i. 346 lbs /312 lbs /250 lbs /345 lbs
 - e. ASTM D 3043: Method D Flexural Strength (MOE/MOR)
 - i. Load (parallel / perpendicular): 648 (lbf) / 533 (lbf)
 - ii. MOE/MOR (parallel): 1,442.199 (psi) / 9,449 (psi)
 - iii. MOE/MOR (perpendicular): 624,875 (psi) / 7,694 (psi)
 - f. ASTM D3500: Tensile Strength
 - i. Parallel: 1015 Load (lbs) 3584 Strength (psi)
 - ii. Perpendicular: 603 Load (lbs) 151 Strength (psi)
 - g. ASTM D5116-06: Organic Emissions [**CA Section 01350**]
 - i. Classroom scenario / Office scenario:
 - ii. Flat Grain: Pass / Pass
 - iii. Edge Grain: Pass / Pass
(0.00 µg/m3 formaldehyde detected)

2.03 ACCESSORIES

- A. DuraPalm edge banding strips, 7/8" inches width by 1/16" (2 mm) thickness by 72" inches length.

END OF PRODUCT SPECIFICATION