



**SECTION 09 62 23**  
**PREFINISHED BAMBOO FLOORING**

General notes to the specifier:

This is a template: edit this specification carefully to suit specific project requirements.

Following guidelines established by the construction specifications institute

This specification section organizes information in three parts:

Part 1 – General: describes administrative and procedural requirements;

Part 2 – Products: describes materials, products, and accessories to be used in the project; and

Part 3 – Execution: describes how these products are to be installed.

Referenced section numbers and titles are based on *Masterformat*, 2004 edition.

This section assumes the project manual contains complete Division 1 documents including Sections 01 33 00- Submittal Procedures, 01 62 00- Product Options, 01 25 00- Substitution Procedures, 01 66 00- Product Storage And Handling Requirements, 01 74 23- Final Cleaning, 01 77 00- Closeout Procedures, and 01 78 00- Closeout Submittals. If the project manual is lacking these sections, additional information should be included under the appropriate articles herein.

Editing guide:

*/ italicised paragraphs* are notes to the specifier and should be deleted from final draft.

[square brackets] denote options requiring selection by the specifier- delete unused options.

\_\_\_\_\_underlined blanks indicate items that may require supplementary information.

**Bold face type** is used to highlight optional paragraphs and phrases that may be selected or deleted as required. Reformat bold face type when including these elements



## PART 1 - GENERAL

### 1.1 SUMMARY

- A. Section Includes: Prefinished, [pre-stained] solid bamboo strip flooring installed by the [nail-down method.] [glue down method.] [nail and glue-down method.]
- B. Related sections:

*List other specification sections dealing with work directly related to this section and for other types of flooring materials abutting the bamboo flooring*

1. **01 35 14 - LEED Credit Summary.**
2. **03 30 00 - Cast-in-Place Concrete: Concrete slab substrate.**
3. **06 10 00 - Rough Carpentry: Wood subfloor.**
4. **06 20 00 – Finish Carpentry: Baseboards and associated trim not otherwise included in this section.**
5. \_\_\_\_\_ - \_\_\_\_\_.

### 1.2 SUBMITTALS

- A. Submit under provisions of Section 01 33 00- Submittal Procedures the following items:
1. Product Data.
    - a. Flooring: Include **complete range of 54 available colors or selected custom-matched colors**, adhesive used in manufacture of flooring planks and finish data.
    - b. **Accessories.**
    - c. **Installation adhesive.**
  2. Shop Drawings: Include direction of flooring, fastening method, flooring patterns and color layout, and 1:1 scale sectional details of **accessories and** transition to other flooring materials.
  3. Samples:
    - a. 12 inch (300 mm) long piece of pre-finished bamboo flooring material in specified stock or custom color-matched color.
    - b. Fasteners.
    - c. **One of each specified accessory, minimum 4 inches (100 mm) long.**
  4. Quality Assurance/Control Submittals:
    - a. Qualifications: Proof of manufacturer and installer qualifications.
    - b. Test Reports: Reports for specified Physical Property Performance Requirements.
    - c. Manufacturer's Installation Instructions.
- B. Closeout Submittals: Submit under provisions of Section 01 78 00- Closeout Submittals the following items:
1. Maintenance Instructions.
  2. Letter of Warranty.



- C. LEED Submittals:
  - 1. Credit EQ 4.1: Wood flooring adhesive manufacturer's product data indicating that the adhesive used has a VOC of less than 100 (g/L less water).
  - 2. Credit EQ 4.2: Wood flooring coating data indicating finish used has a VOC of less than 275 g/L.
  - 3. Credit EQ 4.4: Low-Emitting Materials: Manufacturer's information showing adhesives used in flooring contain no urea formaldehyde.
  - 4. Credit MR 6: Rapidly renewable material.

### 1.3 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Manufacturer Qualifications
    - a. Minimum five years experience in the development, manufacture and distribution of high-performance polyurethane floor coatings and stains for cork and bamboo flooring.
  - 2. Installer Qualifications:
    - a. Minimum three years experience in hardwood and/or bamboo flooring installation.
    - b. **Minimum three years experience in installation of hardwood and/or bamboo flooring over radiant heating systems.**

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Reference Section 01 66 00- Product Storage and Handling Requirements.
- B. Deliver bamboo flooring to project site in original packaging not less than 5 days prior to installation start date.

### 1.5 PROJECT/SITE CONDITIONS

*For a **radiant floor heating system** specify "5 days" in the paragraph below, otherwise specify "72 hours."*

- A. Environmental Requirements: Area to receive bamboo flooring, bamboo flooring material **and adhesive** must be maintained at normal occupancy temperature and humidity levels for minimum [72 hours] [5 days] prior to, during and continuously following installation.

### 1.6 WARRANTY

- A. Structural Warranty: 25 years against delamination, separation, buckling or cupping as a result of a manufacturing defect when installed and maintained in accordance with manufacturer's installation instructions.



- B. Finish Warranty: 5 years against wear through to the underlying bamboo flooring or separation from the flooring when installed and maintained in accordance with manufacturer's installation and maintenance instructions: one coat of MP765 water-base polyurethane is applied yearly for high-traffic retail areas, two to three years for low to medium commercial traffic and five to seven years for residential applications.
- C. Color Warranty: no fading or discoloration of the stain over time.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. DuroDesign Flooring Inc. Toll free: (888) 528-8518  
4656 Louis B. Mayer, Unit #9, Tel.: (450) 978-3403  
Laval, QC, Canada H7P 6E4 Fax: (450) 978-2542  
Website: <http://www.durodesign.com/> e-mail: [info@durodesign.com](mailto:info@durodesign.com)

| *Insert name, address and phone numbers of local distributor/dealer below.*

- 1. Distributor/Dealer:

| *Choose either vertical grain or flat grain below*

- B. Bamboo Flooring Strip Type:
  - 1. **Flat Grain: Bamboo strips laminated together face up to form a 3-ply solid bamboo plank without internal voids.**
    - a. **Color: [Natural] [DuroDesign Color ] [Natural and colored as shown on Drawings].**
  - 2. **Vertical Grain: Bamboo strips laminated together with edges exposed to the wear surface to form a solid bamboo plank without internal voids.**
    - a. **Color: [Natural] [DuroDesign Color ] [Natural and colored as shown on Drawings].**
- C. Substitutions: None Permitted.

### 2.2 MATERIALS

- A. Bamboo Flooring:
  - 1. Species: Mao Zhu (Moso) (Phyllostachys Pubescens).
  - 2. Size: 3-5/8 inches (92 mm) wide by 5/8 inch (16 mm) thick by 72 inches (1829 mm) long.
  - 3. Edge: Full square-edged Tongue and groove.
  - 4. Back: Channeled.
  - 5. Chemical Treatment: Natural borate solution and hydrogen peroxide to eliminate pests and mildew.
  - 6. Factory finish: Six coats MP 765 water base polyurethane for high traffic use and maximum transparency



7. Physical Property Performance Requirements:
  - a. Hardness: ASTM D 1037, Janka Ball: Minimum 1820 lbs (8100 N).
  - b. Dimensional Stability: ASTM D 1037: Dimensional change coefficient: 0.00144.
  - c. Flammability: ASTM E 648: Class I Interior Floor Finish rating per NFPA 101.
  - d. Smoke Density: ASTM E 622: Maximum 270 in flaming mode; 330 in non-flaming mode.
  - e. Compressive Strength: ASTM D 3501: Minimum 7,600 psi (52 MPa) parallel to grain; 2,600 psi (18 MPa) perpendicular to grain.
  - f. Tensile Strength: ASTM D 3500: Minimum 15,300 psi (105 MPa) parallel to grain.
  - g. Slip Resistance: ASTM F 1679, English XL test: Average Dry Slip Index: 0.630.
  - h. Abrasion Resistance: ASTM D 4060, CS-17 Taber abrasive wheels: Final wear-through: Minimum 12,600 cycles.
  - i. Moisture Content: ASTM D 4442, Oven Dry Method: 5.47 percent average.
  - j. Formaldehyde Emissions: ASTM E 1333: 0.003 ppm average.

**B. Adhesive: One-part moisture-cured urethane premium wood floor adhesive.**

**C. Fasteners:**

1. **1-1/2 Inch (38 mm) Thick Subfloor: 2 inch (50 mm) nails.**
2. **3/4 Inch (19 mm) Thick Subfloor: 1-1/2 inch (38 mm) nails.**
3. **1 inch (25 mm) Thick Plywood Subfloor Over Concrete: 1-1/4 inch (32 mm) nails.**

### 2.3 ACCESSORIES

A. Subfloor filler: Portland cement-based as recommended by bamboo flooring manufacturer.

*Insert accessories such as baseboards, transition strips, thresholds here. Coordinate installation of transition strips to other flooring materials and finished floor heights, if applicable, and determine which flooring installer should provide transition materials .*

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates upon which bamboo flooring will be installed.
1. Verify that subfloor is structurally sound, clean, dry, and free of contaminants that would interfere with bonding of the flooring adhesive (such as concrete curing compounds, waxes or oils).
  2. In wood frame structures, do not begin installation of strand bamboo flooring until the moisture content of wood subfloors is at a maximum of 12% and within 4% of the moisture content of the flooring material.

*Following three paragraphs apply only to bamboo flooring installed over concrete substrates.*

3. Test concrete floors for moisture vapour emission using a Calcium Chloride test. Do not install bamboo flooring if vapor pressure exceeds 3 lbs per 1,000 square feet (15 g per m<sup>2</sup>) in 24 hours.
4. Test alkalinity of the concrete slab to confirm it is within adhesive manufacturer's acceptable range.
5. Document test results and mark all test location(s) on As-Built Drawings.



- B. Verify that HVAC system is operating and maintaining occupancy level temperature and humidity conditions.
- C. Report unsatisfactory conditions to Architect and/or General Contractor and correct before proceeding.

### 3.2 PREPARATION

- A. Acclimatization: Open bamboo flooring boxes and remove packaging a minimum 3 days prior to start of installation. Consult manufacturer's installation instructions for complete instructions.
- B. Grind and fill subfloor using methods and materials appropriate to the subfloor construction to eliminate humps and depressions exceeding 1/8 (3 mm) inch in 6 feet (1830 mm).
- C. Clean surfaces thoroughly prior to installation.

### 3.3 INSTALLATION

*Under normal installation conditions, the manufacturer's installation instructions are sufficient. Unusual or unique site or design conditions may demand supplementary information in this article.*

- A. Bamboo Flooring: Install in accordance with manufacturer's complete installation instructions by [nailing or stapling to substrate] [gluing to substrate]. Details below are a summary only.
- B. Lay bamboo flooring in the direction(s)/pattern(s) as shown on Drawings.
- C. For a blended appearance select pieces randomly from several boxes.
- D. Allow 3/8 inch (10 mm) space for expansion and movement of bamboo flooring at walls and permanent obstructions.

Include the following paragraphs if adhesive installation method is used.

- E. Use the "wet lay" or "walk-on-work" installation method as specified by the adhesive manufacturer. Use only adhesive recommended by flooring manufacturer. Adhere bamboo flooring strips without gaps. Ensure that each floor strip is completely adhered to substrate.
- F. Immediately remove excess adhesive from pre-finished surface of bamboo flooring.

Include the following paragraphs if nail-down installation method is used.

- G. Lay strip bamboo flooring over wood subfloor parallel with length of room.
- H. Blind nail bamboo flooring to subfloor with power driver. Space fasteners at 6-10" (152-254 mm) and 2" (51mm) from end of boards. Stagger end joints from row to row by a minimum of 12" (305mm).
- I. **Accessories: Install using methods appropriate to the accessory and flooring system.**



3.4 CLEANING

- A. Reference Section 01 74 23- Cleaning.
- B. Follow manufacturer's recommended maintenance instructions.

3.5 PROTECTION

- A. Repair or replace defective or damaged work as directed by the Architect. All chipped, scratched or otherwise damaged or defective work will be repaired or replaced. All repairs shall be undetectable. Use manufacturer-supplied touch up stain if required.
- B. Cover and protect completed bamboo flooring from further construction traffic with heavy kraft-paper or other suitable covering. Do not use non-breathable sheet or film that could cause condensation to form. Maintain covering throughout remainder of construction period.

END OF SECTION

This specification was last updated in September 2008.  
The most recent revision of this document is available at [www.durodesign.com](http://www.durodesign.com)