

# **INSTALLATION GUIDE**

*Bambo*<sup>™</sup> Bamboo Flooring

Solid-Engineered & E-Z Lock

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## **Section 1.0**

### **General Information**

This is not intended to teach the installation of wood flooring. It should help you determine if you have the tools and skills necessary...

We recommend a qualified wood flooring professional. The installer assumes all responsibility for final inspection of product quality and assessing jobsite conditions. This should be done before installation. NOTE: Detailed procedures are outlined by the National Wood Flooring Association's Hardwood Flooring Manual. NWFA (800) 422-4556

### **Section 1.1**

#### **Measuring & Estimating**

Measure the Square Footage (SF) of the area to be covered (Length x Width). Add five per cent (+ 5%) for cutting waste. If installing on the diagonal add eight per cent (+ 8%). Other variables to consider are if the room has a lot of irregularities and the efficient use of cut pieces. Partial boxes should be saved by the owner in the event of future repairs or replacement.

### **Section 1.2**

#### **Jobsite Conditions**

There is no substitute for a job-site and subfloor inspection by a knowledgeable wood flooring specialist. Prior to installation, the installer must determine that the jobsite environment and the sub-surfaces involved, meet or exceed all requirements as stipulated. Moreover, the completed floor is only as good as the subfloor. Do not use solid-engineered products below grade or in damp, humid conditions.

**E-Z Lock**<sup>™</sup> Floating Bamboo Floor, with appropriate underlayment and barrier preparation, or a laminate flooring can be used below grade.

The surface slope or grade should not direct water toward the structure. For new construction the building should be closed in with windows and doors in place. Wood floors should be installed as late in the job timing as possible. Subflooring moisture contents above 12% to 14% can cause moisture related problems<sup>1</sup>. All concrete, masonry, sheetrock and framing members should be dry before the flooring is delivered to the job site.

### **Section 1.3**

#### **Handling & Storage**

In warm months the building must be well ventilated; during winter months heating should be maintained near occupancy levels (at least 60° F and 45% *relative humidity*<sup>2</sup>) for five (5) days before the flooring is delivered. Extended times without HVAC controls can promote elevated moisture conditions which can adversely affect flooring.

When jobsite conditions are satisfactory, have the flooring delivered and broken into small lots and stored in the rooms where it will be installed. Allow four to five (4 – 5) days more, for the flooring to become *acclimated* to the job site conditions. Open/remove packaging and cross stack planks for proper air circulation (*racking*)

### **Section 1.4**

#### **Subflooring Requirements**

No room in any house is perfectly square, level, flat and plumb. It is crucial to properly assess the condition of the surface over which you are to install a wood floor. Remember, the completed floor is only as good as the subfloor. Every installation will require some degree of attention and correction to the subfloor. The subfloor must be flat (use a six-foot straight edge), dry, structurally sound, clean and free of grease, oil and other contaminants, as well as protruding nails/staples. Tolerance should be flat to within 3/16" in 10' or 1/8" in 6'.<sup>3</sup> High spots should be sanded/ground flat. Low spots should be leveled (flat), e.g. concrete with a self-leveling compound or for wood subfloors use wood shims wedged between joists and the subfloor to raise it...

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## Section 1.5.0 Tools Required

It is not intended to teach you how to use these tools. You must consult the owners manual and get proper education to operate each tool and supply and understand its warnings...

### 1.5.1.0 Measuring

- 1.5.1.1 Tape Measure
- 1.5.1.2 Chalk Line & Chalk
- 1.5.1.3 Pencil
- 1.5.1.4 Straight Edge
- 1.5.1.5 Six Foot Level
- 1.5.1.6 Framing Square
- 1.5.1.7 Moisture Meter. Note: If the moisture meter does not give a qualified number in the concrete slab, but indicates the presence of moisture, then the **Calcium Chloride Test** needs to be run. (Instructions per Test Kit).
- 1.5.1.8 Hygrometer (Relative Humidity)
- 1.5.1.9 Wall Alignment Spacer
- 1.5.1.10 Wedges and *Spacers* (12" intervals)

### 1.5.2.0 Safety - Follow all safety instructions and MSDS (Material Safety Data Sheets)

- 1.5.2.1 Eye Protection
- 1.5.2.2 Respiratory Protection
- 1.5.2.3 Knee Pads (avoid hard plastic)
- 1.5.2.4 Soft Soled Shoes

### 1.5.3.0 Pre-Installation

- 1.5.3.1 Base Molding Lifter
- 1.5.3.2 Pull Bar
- 1.5.3.3 Stand-Up Scraper
- 1.5.3.4 Hinge Pin Remover

### 1.5.4.0 Cleaning

- 1.5.4.1 Duster (Counter Brush)
- 1.5.4.2 Broom
- 1.5.4.3 Dust Pan

### 1.5.5.0 Cutting Tools

**NOTE:** Saw down into the top of the plank

- 1.5.5.1 Utility Knife and extra blades
- 1.5.5.2 Chisels
- 1.5.5.3 Jamb Saw
- 1.5.5.4 Power Miter Saw
- 1.5.5.5 Reciprocating Saw
- 1.5.5.6 Circular or Jig Saw
- 1.5.5.7 Carbide Tipped Blades

### 1.5.6.0 Other Tools

- 1.5.6.1 Rip Hammer
- 1.5.6.2 Nail punch
- 1.5.6.3 Rubber Mallet
- 1.5.6.4 Tapping Block
- 1.5.6.5 Pull Bar
- 1.5.6.6 *Slip Tongue* (T&G only)

### 1.5.7.0 Glue Down

- 1.5.7.1 Trowel (e.g. **Bostik's Best** use  $\frac{1}{4}$ " x  $\frac{1}{4}$ " **Square Notch**. Coverage 35 SF/Gal and see instructions)<sup>4</sup>
- 1.5.7.2 Installation Clamp (designed to hold 3 to 5 planks until the adhesive bonds.
- 1.5.7.3 Clean Towels, damp and dry
- 1.5.7.4 Solvent (Neutral Mineral Spirits)

### 1.5.8.0 Nail Down

- 1.5.8.1 Nailing Machine (use only a nailer that engages the top profile over the tongue at the appropriate angle - 45°)
- 1.5.8.2 Compressor
- 1.5.8.3 Extension Cord(s), grounded.
- 1.5.8.4 Nail Punch
- 1.5.8.5 Fasteners (See Nail Schedule)
- 1.5.8.6 *Face Nails* (for Starter Board)

### 1.5.9.0 **E-Z Lock**<sup>™</sup> Floating

Floating means it is not fastened.

**Underlayment** and **moisture barrier** are separate items and should not be confused

- 1.5.9.1 6.0 mil *PE* Plastic (4" to 6" overlap)
- 1.5.9.2 3M Blue Mask Tape
- 1.5.9.3 Polyethylene tape or water-resistant duct tape (depends on subfloor type)
- 1.5.9.4 Underlayment
- 1.5.9.5 Ratchet Strap Clamps (it may be helpful to ensure a square, tight fit)

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## 1.6.0 Preparing to install

Remove molding to make wall line fitting more accurate and use this space for the required expansion. All wood expands across the grain. Allow at least **3/8” to 3/4” expansion space**<sup>5</sup> parallel to the direction of the floor.

- 1.6.1 Carefully remove all existing wall base, trim, and transition moldings using a pry bar. Use a utility knife to score along the top edge of the base molding **BEFORE** removal. Lay a plank on the subfloor at the **door casing** as a depth guide and mark. Use a Jamb Saw to undercut the casing. Remove existing **thresholds** and plan how to handle the pieces after the bamboo floor has been added. Loosen floor registers, floor electrical outlets, radiators... so they can be elevated and flooring placed underneath.
- 1.6.2 Existing Floor Covering: Look under the carpet! Find out for sure whether the subfloor is wood, particle board (unacceptable), tile, concrete... Some adhesives will not work properly over resilient floor covering. **Removal is always the best practice.**
- 1.6.3 Measure out the entire work area to ensure proper plank layout. Keep in mind, the **last plank** to be laid must be **at least 2” wide**. Divide the work area width in inches by the plank width. This number will tell you how many planks are required across the room. It will also help you figure out the width of the last plank.
- 1.6.4 Use planks from **several cases at the same time to insure good color and shade mixture.**

## 1.7.0 Design Options

- 1.7.1 Determine the **focal point** of the room. Ask yourself “*When I walk into the room, what do I see first?*” And after the floor is installed: “*Where must the floor look its best and the rows the straightest?*” If the room is without any obvious focal point, then you should determine the traffic pattern of the room, or how the room will be used.
- 1.7.2 “**Dry Lay**” planks down on the floor so that you can see how the floor direction looks to you...
- 1.7.3 In “normal” installations, Plank Floors Should Run the Long Way of the Room. Plan to begin along the longest exterior wall, or the longest uninterrupted interior wall. Start with the **first plank**, and **measure** from the vertical (wall facing) **3/8” to 3/4” expansion space** plus face width of the first row plus 1/4” for tongue extension (T&G), and **mark** near one end of the run. Measure the same distance out and **mark** near the other end of the run. Snap a **chalk-line** between the marks.

Should the installation continue into other rooms, or down an adjoining hallway, measure from your **starting line** to check the straightness of the floor in these other areas. It may be that you will need to adjust your starting line slightly to benefit the appearance of the completed floor in the other room.

In large installations with cross grain width being 24 feet or more, consider starting from **centered** chalk line with two planks groove to groove and joined with a *slip tongue*.<sup>6</sup> This method will cut potential expansion trouble in half. *Slip tongue* reversal of laying direction also will prove useful when you need to enter rooms off hallways.

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## 2.0 Subfloor

**2.1.0 Concrete** – Nail Down must have an approved subfloor cover over the concrete. Also, a moisture barrier is recommended anytime solid wood/bamboo is installed over concrete.

2.1.1 Perform moisture test. Subfloor must be within 4% moisture content (MC) of the flooring before installing. <sup>7</sup> **Note:** Before moisture test begins, the slab must be cured for a **MINIMUM** of 30 days. 50 to 60 days <sup>8</sup> old depending on time of year and location (see sect. 1.5.1.7).

2.1.2 Sealers or Curing Agents: Chemicals used to seal or cure slabs will generally lay on the surface of concrete, create a barrier against the penetration of wood floor adhesives that the adhesive will not adhere. An easy test is a drop of water on the surface. If it “beads” rather than spreads and soaks into the slab, then suspect a sealer and plan to remove it.

2.1.3 Painted concrete should have the paint removed, especially if it is enamel-type or flaking and chipping. Oil spills must be cleaned.

**2.2.0 Wood** - Level wood subfloors is required. A weak sagging, concave surface will require additional strength, bridging, center support beams, pillars or jack posts from below. Foundations that have settled and center posts that have not, create a convex surface that may require tapered *sleepers* and added plywood. Small areas can be corrected by *shimming* between the subfloor and the top of the joists.

2.2.1 Particle Board: **Do not nail to** particle board. It does not provide enough nail-holding strength. Nail floors to multi-layered products or solid lumber only.

2.2.2 Plywood: The minimum plywood subfloor on 16” spaced joists should be 1/2” thick for nail products and 3/4” *SE* for glue down.<sup>9</sup> Direction should be installed with the face grain running at 90° to the joists. That is, the 4’ end on a joist and the 8’ length across the joists. If too thin you must add plywood, offset the joints and nail on 6” centers with headed nails long enough to protrude through the bottom of the existing subfloor.

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## 3.0 Installation

**NOTE:** Failure to follow proper installation instructions will void the manufacturer's guarantee and warranty.

### 3.1.0 Glue Down

- 3.1.1 Chalk line (see sect. 1.7.3).
- 3.1.2 Trowel (e.g. **Bostik's Best** use  $\frac{1}{4}$ " x  $\frac{1}{4}$ " **Square Notch**. Coverage 35 SF/Gal and see instructions)
- 3.1.3 Spread adhesive from the large area back to the **starting line** in a small 3 foot work area.
- 3.1.4 After the required *flash time*, with the tongue on the line, lay one row of planks along the entire length of the starting line. The groove side is to the field.
- 3.1.5 Use cutoffs or half planks as starters for the next row (see sect. 4.1.2). Stagger or offset the end joints by at least 6 inches. Avoid an H-Pattern.
- 3.1.6 Apply groove over tongue so use care not to scoop adhesive. Add two more rows of flooring.
- 3.1.7 Adjust the initial row to the chalk line and pin both ends of each board.
- 3.1.8 Snug the other two rows to the starting row. An **Installation Clamp** is useful (see sect. 1.5.7.2).
- 3.1.9 Allow adhesive to bond (e.g. overnight) creating a firm "**starting block**".
- 3.1.10 Clean planks as required.
- 3.1.11 Use **spacers** around the perimeter (see section 1.5.1.9 and 1.5.1.10).
- 3.1.12 Add transition strips and molding as required (see section 6.0).

### 3.2.0 Nail Down

- 3.2.1 Tongue & Groove (T&G) Flooring is *blind nailed* on the Tongue Edge with *face nailing* required on starting runs and finishing runs. Location and straight alignment of the first course is important. Select planks and line them up with the **chalk line** (see sect.1.7.3), groove to the wall. *Face nail* or *top nail* near the wall so base and shoe molds will cover (see section 6.0).
- 3.2.2 *Face nail* (with nail punch **upon completion** of the **first row**) every 8 to 10 inches and within 5 inches of each end of every plank. "*Blind*" or tongue nail at a 45° angel at the same spacing.
- 3.2.3 Use at least two (2) nails per plank
- 3.2.4 Use cutoffs or partial planks as starters for the next row (see sect. 4.1.2). Stagger or offset the end joints by at least 6 inches. Avoid an H-Pattern.
- 3.2.5 Continue out several rows by *blind nailing* until the automatic nailer will clear the wall.
- 3.2.6 For wide expanses sometimes it is recommended to leave a slight expansion crack, about the thickness of a putty knife, between planks.<sup>10</sup> **Consult a qualified local wood flooring professional.**
- 3.2.7 Check regularly for straightness of your rows and adjust if necessary.
- 3.2.8 As you approach the final wall and can no longer use the automatic nailer, resume *blind nailing* by hand
- 3.2.9 Add transition strips and molding as required (see section 6.0). (*continued*)

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## 3.0 Installation *(continued)*

### 3.3.0 E-Z Lock™ Floating Floor

Floating means the floor is not fastened to the subfloor. Our unique locking system eliminates the need for glue allowing for fast installation. The technology combines a real bamboo surface with a high density fiberboard bottom.

3.3.1 Moisture Barrier (esp. Concrete) **6.0 mil polyethylene film**, overlapping edges 4-6"<sup>11</sup> and allowing enough to bend 2"-4" **up the wall** on all sides this allows moisture vapor to escape from under the floor. Where moisture conditions are more severe prime and apply cold-type cut-back asphalt mastic with a straight edge over the entire slab surface (100 SF/GAL) allow to dry about 1 hour. Lay the 6 mil polyethylene film over the slab, covering the entire area and overlapping 4-6". "Walk in" or roll in the film, stepping on every square inch of the floor to assure proper adhesion. Small bubbles are of no concern, and may be punctured to allow captive air to escape.

3.3.2 Underlayment (usl. 1/8" Foam) Once the subfloor is flat, dry and clean roll out the underlayment and lay side-by-side (**no overlap**) tape seams completely with water resistant duct tape or polyethylene tape. At wall, bend approximately 2"-4" of underlayment **up the wall** this allows moisture vapor to escape from under the floor. After the flooring installation is complete, use a knife to cut underlayment along wall even with top of floor plank. Too soft or thick an underlayment can cause boards to rub together and cause a sound.

3.3.3 *Spacers* or a 3/4" thick and at least 3 "wide piece of wood acts as a starter board to press your first row against and to maintain the required expansion space and First and Last rows (minimum 3" scribe cut).

3.3.4 In "normal" installations, Plank Floors Should Run the Long Way of the Room. Plan to begin along the longest exterior wall, or the longest uninterrupted interior wall. Start with the **first plank**, and **measure** from the vertical (wall facing) **3/4" expansion space** plus face width of the first row plus 1/4" for tongue extension, and **mark** near one end of the run. Measure the same distance out and **mark** near the other end of the run. Snap a **chalk-line** between the marks.

Should the installation continue into other rooms, or down an adjoining hallway, measure from your **starting line** to check the straightness of the floor in these other areas. It may be that you will need to adjust your starting line slightly to benefit the appearance of the completed floor in the other room.

3.3.5 **Begin** in the corner with the plank tongues facing the wall. Working **left to right** create a line of planks to the opposite corner by dropping in the end-joints together. Complete the first row by cutting the plank as needed.

3.3.6 Start **second row** at the opposite corner (working **right to left**) by inserting the partial plank at an angle into the first rows groove. The ends bottom joint is facing up.

3.3.7 Stagger or offset the end joints by at least 6 inches. **Avoid an H-Pattern** Use cutoffs or partial planks as starters for the subsequent rows (see sect. 4.1.2)

*(continued)*

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**Solid-Engineered & E-Z Lock**

## **3.0 Installation** *(continued)*

### **3.3.0 E-Z Lock<sup>™</sup> Floating Floor**

3.3.7 Repeat the procedure until the last row. These final planks should be no less than 3" wide. Position a plank that has been cut to the correct length over the last plank in the previous row and align the two planks exactly (maintain staggered end joints)

3.3.8 Lay a 3" long scrap piece of plank with the tongue against the wall over the top of the plank to be cut and scribe the contour of the wall with a pencil. Saw each plank in the last row accordingly and fit them into required 3/4" expansion space between these planks and the wall.

## **4.0 TIPS**

### 4.1.0 Installation

Read all instructions first. Before you start get answers to any questions.

4.1.1 Work from left to right. Left is determined by having your back to the wall where the starting run is laid.

4.1.2 Always work at least four rows ahead to watch for patterns and boards that stand out.

4.1.3 Short pieces. (Avoid less than 8")  
For best appearance always use long planks at entrances and doorways. Incorporate short pieces at random in the floor.  
Do not group in one area.

4.1.4 Put a "frame" around obstructions.  
You can have a more professional look if you "frame" hearths and other obstructions, using mitered joints at the corners.

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### 5.0 Moldings / Trim

Once the flooring is installed it is time to finish with molding. Moldings blend, not match, to the floor. Never nail or glue the molding to the finished floor, except for flush reducers (where it is bonded to flooring, not the subfloor, allowing both to float over the adjoining floor).

Wood floors require expansion space at the wall. Moldings are used to cover the expansion area, to hide cut ends, to create height differences, and to accent the floor.

Moldings are available to complete your installation, each serving a different purpose.

#### **BASEBOARD:**

Used to protect the wall and “picture-frame” the wood floor. Provides an eye-pleasing transition from the wood flooring surface to the adjacent wall while covering the required expansion allowance along the perimeter walls.

#### **QUARTER ROUND:**

One quarter of a full round. Used on vertical face bases to complete expansion coverage. The molding is bonded to the wall or baseboard and the flooring floats under the molding.

Covers expansion gap required between walls and flooring.

Used to provide expansion area coverage where the existing wall base will remain in place.

#### **STAIR NOSING:**

Used to create finished edge on top step, around stairwell, sunken living room, etc.

Used on stairways in a glue down or nail down application.

**[Overlap]** Provides a secure transition from the flooring surface while allowing the floating flooring system to expand and contract freely at the step-down location.

### TRANSITIONS

#### **REDUCER:**

Used to make transition in thickness from wood floor down to thinner surface, generally through door openings.

Used to reduce the height differential when hardwood meets vinyl flooring, ceramic tile or low pile carpeting.

Used to make the transition from the wood flooring height to a flooring system of lesser height such as vinyl or laminate.

**Flush reducers** - it is bonded to flooring, not the subfloor, allowing both to float over the adjoining floor.

**Lap reducers** – The molding is bonded to the subfloor and the flooring floats under the molding.

**T-MOLDING:** Used to join hardwood to hardwood, hardwood to ceramic or to any other solid floor covering that may be of equal height.

Bridges the expansion area required between wood floors, from one room to another, or as a transition between wood flooring and a floor of equal height.

The molding is bonded to the subfloor and the flooring floats under the molding

**END-CAP [Square Nose Reducer]:** Butts against higher carpet, around fireplaces and sliding glass doors.

Used to provide a smooth transition from the wood flooring surface to adjacent carpet installations, sliding glass doors, floor to ceiling windows, or bathtub and shower surrounds.

*(see the molding specification sheet for the details)*

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## 6.0 Maintenance

### PRODUCT DESCRIPTION

*Bambo ScratchGuard*<sup>TM</sup> - 5/8" thick tongue and groove flooring is constructed of 100% solid bamboo strips bonded together under intense heat and pressure; *Bambo EasyLock*<sup>TM</sup> Line – 5/8" thick plank is constructed of one (top) layer of solid bamboo strip bonded together with an environmental friendly material made HD board. It is pre-finished with UV treated *polyurethane* (oil based). It is important for you to know how your floors were finished so you can decide on the proper floor care product.

### PREVENTATIVE MAINTENANCE

Good preventative maintenance lengthens the intervals between major renovations operations such as re-coating and refinishing

- ◆ Keep grit off the floor. Use dirt-trapping, walk-off mats at all exterior doors to help prevent dirt, grit and sand from getting inside. Throw rugs just inside the entrances are also recommended. Keep door mats clean.
- ◆ In kitchens, use area rugs at high spill locations and at work stations – stove, sink, refrigerator. Cotton is generally the best fabric since it is easily washed. Mats with a smooth backing, i.e. rubber or vinyl, may trap water beneath.
- ◆ Ultra Violet light sources or sunlight may give the appearance of discoloring under a rug. Occasional moving of rugs and window treatments is recommended.
- ◆ Put fabric/felt glides on the legs of your furniture; they allow furniture to be moved easily without scuffing the floor. Clean the glides regularly since grit can become embedded in them.

- ◆ Avoid casters made of hard materials like metals or hard plastics. Grey, non-marking rubber barrel type casters are best.
- ◆ Overflow bowls and clay pots account for nearly half the water damage in wood flooring. We suggest placing at least ½ inch of dense cork, available at most hardware stores, between potted plants and wood flooring.
- ◆ Never try to slide or roll heavy objects across the floor without precautions.
- ◆ Keep heels on shoes in good repair. Don't walk on your floor with "stiletto-style" heels; they may cause indentation.
- ◆ Keep pet's nails trimmed

### ROUTINE CARE

- ◆ Blot up spills and spots immediately.
- ◆ Vacuum (brush not beater bar) and/or dust mop weekly.
- ◆ Occasionally damp sponge-mop or cloth (wrung-out)

### PERIODIC CARE

- ◆ Periodically clean the floor with a compatible (see product description) floor cleaner, specially formulated for the finish.
- ◆ DO NOT USE WAX, polish or abrasive cleaners, steel wool or scouring powder.

### SUMMARY

Bamboo, like wood floors, are the easiest of all floor surfaces to keep clean and new looking unlike carpeted or resilient floors that show wear regardless of care.



***Bambo*** <sup>TM</sup>

*The Bamboo Flooring for Natural Living*

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## 7.0 Warranty / Claim Procedures

### SUMMARY

The warranties described apply only to the original purchaser in its original installation, and are not transferable. In the event of product non-compliant with our stated warranties **Bambo** will, at our option, repair, refinish, or replace the defective flooring.

### PRE-INSTALLATION

It is the responsibility of the installer to inspect and acclimate the planks before installation. Replacement must be requested BEFORE the floor is installed. Detailed preparation and installation procedures are outlined by the National Wood Flooring Association's Hardwood Flooring Manual (NWFA) 1-800-422-4556

### ADHESIVES

**Bambo**<sup>TM</sup> warrants its undercoated flooring planks against bond failure when Bostik's *Best* Wood Flooring Adhesive or Other Bambo approved wood flooring urethane adhesive, are used. Consult Bostik's instructions and warranty regarding adhesion to underlayments or subfloor materials, patching and leveling compounds, sealants or other coverings. Bostik's 1-800-523-6530 / 909-296-6425 ext. 7

### STRUCTURAL

**Bambo ScratchGuard**<sup>TM</sup> line - 5/8" thick plank is constructed of three layers of solid bamboo strips bonded together under intense heat and pressure; **Bambo EasyLock**<sup>TM</sup> Line – 5/8" thick plank is constructed of one (top) layer of solid bamboo strip bonded together with an environmental friendly material made HD board. **Bambo** warrants its products, in their original manufactured condition, to be free from defects in dimension, lamination and milling. If the product should ever delaminate due to a manufacturing defect, we will arrange for either the repair or replacement of the defective plank(s).

### FINISH

Our factory applied UV cured high scratch resistant finish, is warranted for 25- year (residential), or 5-year (commercial) from the date of purchase against wear through or peeling under normal traffic conditions. Gloss reduction is not considered surface wear.

### DISCLAIMERS AND EXCLUSIONS

Damage caused by improper storage or handling, improper preparation of, or deficiencies in the subfloor, or improper installation methods invalidates the warranty.

Being a natural product bamboo will continue to expand and contract through heating and non-heating seasons. Properly installed floors may consequently experience some separation between the boards at different times during the year. If such separations do occur, they are not covered by this warranty.

Indentations, scratches, stains or damage caused by negligence, excessive dryness or moisture, erosion, pebbles, sand, or other abrasives, pets, spiked or damaged heel shoes, improper maintenance, insufficient protection, misuse, or improper alterations is excluded.

Damage due to water and/or moisture, including but not limited to damage resulting from broken or leaking pipes, wet mopping, or weather conditions or natural disasters is excluded.

Color variations are a natural occurrence and exposure to UV light or sunlight may give the appearance of discoloring under a rug. This is not a product defect. Occasional moving of rugs and use of window treatments is recommended.

Incidental or consequential damages, including loss of time or inconvenience are excluded, however some states do not allow exclusion or limitation, and you may have other specific legal rights, which may vary from state to state.

### CLAIM PROCEDURES

First contact the retailer where the original purchase was made. If your dealer cannot help, call us at 1-888-351-9940. Written notification within 30 days from the date the problem occurs. Photograph the problem, describe the nature of the defect, apparent cause, Which product, where and when it was purchased, Who installed it and how (glue/nail). Samples of the flooring, along with the original invoice for the flooring and adhesive (if applicable), may be required. **Bambo** reserves the right to have a designated representative inspect the floors and remove samples for technical analysis. No installer, retailer, distributor, agent or employee of **Bambo**, has the authority to alter the obligations or limitations of any **Bambo** warranty.



**Bambo** <sup>TM</sup>

The Bamboo Flooring for Natural Living

# **INSTALLATION GUIDE**

*Bambo*<sup>™</sup> Bamboo Flooring

**Solid-Engineered & E-Z Lock**

## **8.0 Glossary**

**Acclimation** – Allowing bamboo/wood to reach equilibrium moisture content with the room it is being installed in. That is, the material is no longer giving-off or absorbing moisture.

**Blind Nailing** – or Tongue Nail is at 45 ° penetrating on the top of the tongue.

**Dry Lay** – Simply setting the planks on the floor and laying out a visual presentation of the flooring and direction before permanent installation.

**Face Nail** – or Top Nail is a vertically positioned nail perpendicular to the plank

**Flash Time** – The amount of time the adhesive takes to

**HVAC** – Heating Ventilating & Air Conditioning

**Moisture Content (MC)** – Generally, flooring is expected to shrink in dry environments and expand in wetter environments. Specifically, MC is defined in solid wood as the weight of water in wood expressed as a percentage of the weight of oven-dry wood.

The ideal MC for flooring installation can vary from an extreme of 4% to 18%, depending on the wood species, the geographic location of the end product and time of year.

In any case, the MC of solid plank flooring should be within 4 percentage points of the subfloor. That is, if the subfloor is measured at 10% MC, then the flooring should have no less than 6% MC and no more than 14% MC. In trees, MC may be as much as 200 % of the weight of the wood substance.

**Source:** NWFA Technical Publication No. A100, *Water and Wood: How Moisture Affects Wood Flooring*, pp.4, 9.

**Plumb** – another way of saying vertical

**Polyethylene (PE)** – see NWFA Technical Publication No. A100, *Water and Wood: How Moisture Affects Wood Flooring*, p.10 ¶ 9 No. 2

**Racking** – a way of stacking bundles of unpacked planks so that they get maximum air circulation for acclimation purposes of the room(s) environs.

**Relative Humidity** – is the amount of moisture that is in vapor form suspended in the air. Bamboo and all wood products, are hygroscopic. Which means they absorb and release moisture in balance with their environment.

**Shim / Shimming** – A thin wedge of wood used to lift or fill a gap or space between two surfaces (e.g. the floor joist and the floor sheathing).

**Sleepers** a.k.a. Screeds – Usually a 2” x 4” laid flat side down and attached to a concrete subfloor to provide a nailing surface for T&G flooring or a wood subfloor.

**Slip-Tongue** – A **spline** insertion or small strip of wood used to reverse or change direction in installing standard tongue-and-groove flooring. The slip-tongue should be fastened in place by nailing every 8 to 10 inches through the slip-tongue. (Some installers also glue the slip-tongue in place with carpenter’s glue).

**Spacers** – serve to create the needed expansion and to give firm backing to the forces that occur during installation. Without them the edges and sides may not properly fit. Also they should be placed at every end joint.

**Square Edge (SE)** – A flooring that is NOT T&G. Square edged flooring is *face nailed* when installed.

**Tongue & Groove (T&G)** – In strip, plank and some parquet flooring; a tongue is milled on one edge and a groove on the opposite edge. As the flooring is installed the tongue of each plank is engaged with the groove of the adjacent plank.

**Trim** – The finished materials in a building, such as moldings, applied around openings (window trim, door trim) or at the floor and ceiling of rooms (baseboard, shoemold, cornice, and other moldings).