



INSTALLATION INSTRUCTIONS SOLID WOVEN BAMBOO FLOORING

READ THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING INSTALLATION. IN ADDITION TO THESE INSTRUCTIONS, WE RECOMMEND THAT THE INSTALLER FOLLOW ALL INSTALLATION GUIDELINES SET FORTH BY THE NATIONAL WOOD FLOORING ASSOCIATION (WWW.NWFA.ORG). WHERE THESE INSTRUCTIONS DIFFER FROM NWFA GUIDELINES, THIS DOCUMENT TAKES PRECEDENCE. THESE INSTALLATION INSTRUCTIONS DO NOT APPLY TO PRODUCTS OTHER THAN SOLID WOVEN BAMBOO FLOORING. 022210

PRE-INSTALLATION JOBSITE REQUIREMENTS

Carefully examine the flooring prior to installation for grade, color, finish and quality. Ensure adequate lighting for proper inspection. If flooring is not acceptable, contact your distributor immediately and arrange for replacement. Manufacturer cannot accept responsibility for flooring installed with visible defects. Prior to installation of any flooring, the installer must ensure that the jobsite and subfloor meet the requirements of these instructions. Manufacturer is not responsible for flooring failure resulting from unsatisfactory jobsite and/or subfloor conditions.

Flooring should be one of the last items installed in any new construction or remodel project. All work involving water or moisture should be completed before flooring installation. Water and Bamboo do not mix, just as water and wood do not mix. Installing onto a wet subfloor may cause permanent damage to the flooring.

Permanent HVAC should be on and operational and maintained between 60-75°F with relative humidity of 30%-60% **for a minimum of 14 days prior to delivery**, as well as during and after installation of the flooring. **When installing over radiant heat, additional restrictions apply – see below.** Humidity levels below 30% will most likely cause movement in the flooring, including gapping between pieces and possible cupping and checking in the face.

Store Solid Woven Bamboo flooring at installation area, with **both ends of all boxes completely opened**, to allow flooring to acclimate to room humidity. Open the boxes carefully so as not to damage them in case repackaging is necessary for a return. Do not store directly on concrete or near outside walls. **This flooring should be acclimated until its moisture content is within 2% of the moisture content of the subfloor.** The closer the match in moisture contents, the better the floor will perform and appear. The HVAC system should be operating normally throughout the acclimation period, and portions of the flooring should be distributed to acclimate in the actual rooms where each portion will be installed. Failure to acclimate properly may result in shrinkage or expansion and cupping/buckling.

PLEASE NOTE: Acclimation will progress more slowly with Woven Bamboo than with hardwoods, due to its extreme density and resin content. In very dry or very humid climates, proper acclimation may require several weeks.

When checking the moisture content of Woven Bamboo, **pin-type moisture meters give misleading readings** because the resin content of the material inhibits its electrical conductivity, and because it is difficult to insert the pins far enough into Woven Bamboo to get a good reading. Non-intrusive surface meters tend to give more accurate readings than pin-type meters. All moisture meters must be adjusted to specific settings for different species. For Woven Bamboo, use the setting for Ipe (Brazilian Walnut). **Using the standard settings for Douglas Fir or Red Oak will give inaccurate readings** and could result in flooring being installed when it is not yet properly acclimated. If the literature provided with your moisture meter does not list a setting for Ipe (Brazilian Walnut), contact the meter manufacturer to determine the correct setting.

This flooring is not warranted for installation over *electric* radiant heat systems. Only hydronic systems are approved. Please carefully read the “Radiant Heat” section below (p. 4) before finalizing product selections.

Solid Woven Bamboo Flooring Installation Instructions | For Assistance Call (877)740.9420

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PRE-INSTALLATION SUBFLOOR REQUIREMENTS

Acceptable subfloor types:

- CDX plywood - at least 5/8" thick for joist spacing up to 16" on center, minimum 3/4" thick for joist spacing greater than 16" on center (19.2" maximum)
- Underlayment grade particleboard (minimum 40 lb. density) - glue-down only
- OSB - at least 3/4" thick, PS 2-92 rated or PS 1-95 rated
- Concrete slab - glue-down only
- Existing wood floor - must be smooth, level, well-adhered and, if gluing new flooring, unfinished
- Resilient tile & sheet vinyl - glue-down only; tile/vinyl must be new and non-urethane-coated
- Lightweight concrete (gypcrete) coated with latex primer - glue-down only (NOTE: EcoTimber provides no guarantee that lightweight concrete or gypcrete will remain structurally sound during the life of the floor. Separation of the flooring from the subfloor caused by deterioration or fracturing of the substrate will not be considered a product failure.)

All Subfloors must be:

- Dry and will remain dry year-round. Moisture content of wood sub floors must not exceed 12%, wood flooring moisture content must be within 2% of wood subfloor moisture content, and concrete must not exceed 3 lbs. per Calcium Chloride Test (test method ASTM 1869-89), or 2 lbs. when installing over radiant heat.
- Structurally sound
- Clean: Thoroughly swept and free of all debris. For glue-down installations, subfloor must be free of wax, grease, paint, sealers, old adhesives, etc., which can be removed by sanding.
- Level: Flat to 3/16" per 10-foot radius

Wood subfloors must be dry and well secured. Nail or screw every 6" along joists to avoid squeaking. If not level, sand down high spots and fill low spots with an underlayment patch. Concrete subfloors must be fully cured, at least 60 days old, and should have minimum 6-mil polyfilm between concrete and ground. If necessary grind high spots down and level low spots with a quality cementitious leveling compound. Resilient tile and sheet vinyl must be well bonded to subfloor, in good condition, clean and level. Do not sand existing vinyl floors, as they may contain asbestos.

If gluing down on concrete that is on or below grade, even if the Calcium Chloride test results are under 3 lbs., we highly recommended the use of a concrete sealer. Remember, a concrete slab on/below grade that measures dry today may become moist in the future due to rising groundwater. Installing a moisture barrier now may be viewed as an insurance policy against concrete becoming wet in the future. This will lead to subsequent floor failure. EcoTimber is not responsible for site related moisture issues.

INSTALLATION TOOLS

For all installation methods:

- Tape measure
- Wood or plastic spacers (1/2")
- Chalk line
- Tapping block
- Crosscut power saw
- Pry bar or pull bar
- Pencil
- Hammer

For nail-down installation, you will also need:

- Pneumatic nailer/stapler appropriate for 9/16" thick flooring and 1-1/4" or 1-1/2" long 18-20 gauge cleats or staples (staples should have 1/4" wide crown). Examples of tools that have been used successfully with this flooring include the Powernail Model 50P nailer and the SpotNails Model WS4840W2 "Striker" stapler, but other nailers/staplers may work equally well. Always test nailer/stapler to ensure that it is not damaging the flooring or causing dimpling before proceeding with installation. Whenever possible, use nylon-coated cleats/staples. **NOTE: Staples or cleats larger than 18 gauge (i.e., 15 gauge) will damage this flooring and void the warranty.**
- Air compressor
- Nail punch
- 15-lb. felt paper or equivalent, meeting ASTM D4869 standards



GENERAL INSTRUCTIONS – ALL METHODS

Make sure subfloor is tested for moisture first and is properly prepared. Since Bamboo, like wood, expands with any increase in moisture content, always leave at least a 1/2” expansion space between flooring and all walls and any other permanent vertical objects, (such as pipes and cabinets). **PLEASE NOTE: Bamboo expands and contracts along its length as well as its width, so it is critical to leave expansion space around the entire perimeter of the floor.** This space will be covered up once you reapply base moldings around the room. Use wood or plastic spacers during installation to maintain this 1/2” expansion space.

No area of connected flooring can span greater than 25 feet in width or 50 feet in length without an expansion gap. For larger spans, install T-moldings or other transition pieces that allow the flooring to expand and contract. More or less spacing may be needed depending on geographical area.

Before laying flooring, install felt paper or adhesive as outlined below in the section specific to your chosen installation method.

Begin installation next to an outside wall. This is usually the straightest and best reference for establishing a straight working line. Establish this line by measuring an equal distance from the wall at both ends and snapping a chalk line. The distance you measure from the wall should be the width of a plank plus about 1/2” for expansion space. You may need to scribe cut the first row of planks to match the wall in order to make a straight working line, as most walls are not straight.

Work from several open boxes of flooring and “dry lay” the floor before permanently installing it. This will allow you to select the varying grains & colors and to arrange them in a harmonious pattern. The actual floor may differ in grain and color from the samples used in selecting the product. This is not a product defect. **It is the installers’ responsibility to work with the end user to determine the expectations of what the finished floor will look like. If the range of color in the shipment does not appear satisfactory after opening a few boxes, do not begin installation.** Contact your dealer immediately to arrange a return.

Dry lay a few rows, (no glue or nails), before starting installation to confirm your layout decision and working line. Before laying flooring, install felt paper, floating floor pad or adhesive as outlined below in the section specific to your chosen installation method.

When laying flooring, stagger end joints from row to row by at least 10”. Avoid ‘H’ patterns, where planks just two rows away from each other end in the same location, by starting each row with a plank cut to a random length. When cutting the last plank in a row to fit, you can use the cut-off end to begin the next row. If cut-off end is 10” or less, discard it and instead cut a new plank at a random length (greater than 10”) and use it to start the next row. Always begin each row from the same side of the room.

Start with the groove edge facing the wall. To draw planks together, always use a tapping block, as tapping the flooring itself will result in edge damage. **Never apply pressure to the groove edge of the flooring – only use the tapping block against the tongue.** When near a wall, you can use a pry bar or pull bar to pry close the side and end joints. Take care not to damage edge of flooring.

After installing three rows, recheck your spacers to ensure that the proper 1/2” expansion space is being maintained. When you reach the last row, remember to leave 1/2” expansion space between the flooring and any vertical surface such as pipes or cabinets.

GLUE DOWN INSTALLATION

EcoTimber suggests using quality flooring adhesives and concrete sealers from Taylor, Bostik, or Dritac. Other adhesives and sealers may be acceptable as well. Please note that not all concrete sealers and adhesives are compatible with one another. Follow the adhesive or concrete sealer manufacturer’s installation instructions when using their products. All warranty or technical issues pertaining to the use of these products should be directed to the manufacturer of the adhesive or sealer. EcoTimber does not directly warrant the performance of adhesive or sealer products.



STAPLE/NAIL DOWN INSTALLATION

Make sure subfloor is tested for moisture content first and is properly prepared. Prior to installation, place a 15-lb. felt paper or equivalent, meeting ASTM D4869 standards, over the entire subfloor, following the manufacturer's instructions.

Use a flooring stapler/nailer of your choice that is appropriate for 9/16" thick flooring after testing to make sure that stapling/nailing will not cause dimpling (localized raised edges) in the finished floor. **Note:** be sure to look at the face of the installed flooring at a low angle from a distance to see if dimpling is occurring, as it is hard to see when directly above the floor. If you see dimpling, STOP and adjust the stapler/nailer shoe, angle/place of staple entry or air pressure until test planks confirm that dimpling is no longer occurring. EcoTimber is not responsible for replacing material that has been installed with dimples.

The correct air pressure needed to install this flooring will vary with subfloor type, but generally ranges between 55 and 95 psi. Regardless of air pressure, staples or cleats larger than 18 gauge (i.e., 15 gauge) will damage this flooring and void the warranty. Using nylon-coated staples or cleats will help ease penetration.

For the first and second starting rows: lay first plank inside chalk line with groove edge toward the wall. Since it can be difficult to get the nail gun in place next to the wall, you may wish to glue down the first rows rather than face-nailing them and leaving unsightly nail holes that must be filled with putty. Make sure the starting rows are straight and drawn tight. After gluing down these rows with Liquid Nails® LN-901 or a similar product, set weight on top of them and allow them to set securely before commencing stapling/nailing the additional rows.

Subsequent rows: Lay by using floor nailer/stapler to blind-nail top inside edge of tongue at a 45 degree angle. Nail each board every 6-8" and 3-4" from each end (to prevent splitting). Remember to stagger end joints from row to row at least 8" apart and use a tapping block to fit boards together. Periodically check (looking from a low angle) to make sure that the stapler/nailer is still not causing dimpling. It may be necessary to face-nail and or glue down the flooring in doorways or tight areas where the nailer/stapler can't fit. The last two rows will need to be face-nailed or glued in the same manner as the first two rows.

RADIANT HEAT

When installing Solid Woven Bamboo over radiant heat, the glue-down installation method is recommended, but nail-down installations are warranted provided that all of these instructions are carefully followed.

This flooring is not warranted for use over radiant heat systems heated by electric elements. Only hydronic systems are approved. Hydronic systems must include in-floor temperature sensors and an outdoor thermostat that allows the system to adjust the water temperature according to anticipated heat loss. Flooring installed in multi-unit projects where the water temperature is not regulated separately in each unit is not warranted.

Prior to installation over radiant heat moisture testing must be conducted and documented per ASTM 1869-89 (Calcium Chloride Test) or, for wood subfloors, using a pin type meter. **The moisture content for concrete subfloors must not exceed 2.0 lbs. per 1000 square feet per ASTM 1869-89 (Calcium Chloride Test), and the moisture content for wood subfloors must not exceed 12%.** If moisture levels exceed these limits, do not install the flooring.

The surface temperature of the subfloor must never exceed 82°F in any location. The temperature setting must always remain within 15°F of normal operating level, and should never be turned completely off. Excessive heat, rapid heating, and/or failure to maintain humidity levels between 30% and 60% are likely to cause cracking, cupping and other forms of floor failure. **Seasonal gapping and surface checking (cracking), particularly at the ends of planks, should be expected in installations over radiant heat and do not constitute a product failure.**

All concrete must be allowed to properly cure and dry for a minimum of 4 weeks prior to the operation of the radiant heat system. The system should then be operated at at least 2/3 maximum output for a minimum of 2 weeks prior to installation of flooring to further allow moisture from the subfloor to dissipate and reach equilibrium. This procedure must be followed regardless of the



time of year. Three (3) days prior to flooring installation, reduce thermostat to 65°F. In glue-down installations, the system should be turned off 24 hours prior to and during installation to prevent premature curing of the adhesive.

As always, relative humidity of the jobsite must be maintained between 30% and 60%. **Use of a humidification/dehumidification system may be required to maintain the proper humidity levels, particularly over radiant heat.** Failure to maintain proper humidity levels will void all warranties.

Beginning 48 hours after installation, slowly raise the temperature of the heating system to its preferred operating level over a period of 5 days.

AFTER INSTALLATION

- Flooring should be one of the last items installed in a project. In order to protect the floors while other trades are finishing their work prior to final cleanup and turnover to the owner, use rosin paper and only use 3M® 2080 Blue Tape to hold the rosin paper to the floor (other blue tapes may damage the finish). Clean the floor thoroughly before laying the rosin paper to ensure that no debris is trapped underneath. **DO NOT USE** plastic film or other non-breathing coverings as this can cause the floor to become damaged from humidity buildups.
- Remove expansion spacers and reinstall base and/or quarter round moldings to cover the expansion space.
- Dust mop or vacuum the floor thoroughly to remove any dirt or debris.
- Buff the floor with lambs wool pads in order to remove any loose splinters, residues, footprints, etc.
- Install any transition pieces that may be needed (reducers, T-moldings, nosing, etc.).
- Place walk-off mats at all entrances to help collect dirt and debris that could damage or dull the flooring finish.
- Install felt floor protectors underneath all furniture.
- In areas such as bathrooms, kitchens, and spaces where food service occurs, top-coating the floor will help prevent against moisture damage. In heavy food service areas such as restaurants, two to three top-coats are recommended. See below under “Top-coating/Re-coating” for specific instructions.

CLEANING AND MAINTENANCE

Prevent Scratches – There is no such thing as a “scratch-proof” wood floor, but following these basic procedures will reduce the likelihood and frequency of scratches:

- Felt padding should be permanently affixed to the legs of all furniture before it is moved into the space.
- Do not allow people to wear spiked heels on the floor, which will damage even the hardest wood floors and finishes.
- Pet claws should be properly trimmed at all times.
- Work boots and shoes that may have pebbles lodged in the soles should be removed prior to entering.

Remove Grit - Care should be taken to prevent dirt, sand and grit from accumulating on the surface of your floor. They will act like sandpaper and abrade the finish. Walk-off mats should be placed inside and out at all exterior exits, and the floor should be swept or vacuumed frequently. All mats or rugs should be cleaned and/or replaced on a regular basis. They should also be moved occasionally to allow natural color changes caused by light to occur evenly in all areas.

Use Proper Cleaning Products - To clean the factory urethane finish, we recommend the Bona-X® Swedish Formula Hardwood Floor Cleaner (www.bonakemi.com, 800-574-4674). To remove hard-to-clean substances such as chewing gum, use Goof-Off® or Goo-Gone®, available at most hardware stores and supermarkets. Floor waxes, oil soaps, and petroleum-based cleaners should not be used under any circumstances.

Avoid Standing Moisture – Water and hardwood floors don’t mix. Never wet-mop your floor, and always clean up spills and standing water as soon as possible. With water or any other cleaning agent, be sure to thoroughly ring out the applicator or mop prior to applying it to the floor. A damp mop is fine as long as the moisture is limited to an amount that will evaporate almost immediately. Moisture that is allowed to seep into the seams between the planks may cause damage to your flooring. Do not allow soiled mats or rugs to stay on the floor as they can trap moisture on the surface.

Top-coating/Re-coating - Periodic recoating in any area will help prolong the life and restore the new appearance of your floor. By recoating the floor at the first signs of wear, you will be able to bring your floor back to new condition with relatively little cost and inconvenience. To top-coat or recoat your floor, lightly screen (abrade) the top surface of the factory finish and then



apply Bona Traffic® floor finish by Bona® (www.bonakemi.com, 800-574-4674). Bona® also offers the Bona Prep® system that allows top-coating without screening or sanding. Follow all Bona® application instructions carefully.

For questions or assistance, call (877) 740-9420.