



## **Solid Strand Woven Bamboo Flooring**

### **Installation Instructions**

READ THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING INSTALLATION. IN ADDITION TO THESE INSTRUCTIONS, WE RECOMMEND THAT THE INSTALLER FOLLOW ALL INSTALLATION GUIDELINES AS SET FORTH BY THE NATIONAL WOOD FLOORING ASSOCIATION.

If the following instructions leave any unanswered questions or if additional information is required, please call Robina Floors Inc. toll free at 678-626-0510

### **FLOORING MATERIAL SHOULD BE INSPECTED PRIOR TO INSTALLATION**

**Responsibility for the suitability of Robina Floors Inc. flooring and accompanying products for each individual installation cannot be assumed by Robina Floors Inc., since Robina Floors Inc. has no control over the installer's proper application. Should an individual plank be doubtful as to appearance or dimension the installer should not use this piece. Robina Floors Inc. will send replacement in a timely fashion.**

### **PRE-INSTALLATION JOBSITE REQUIREMENTS**

ROBINA FLOORS INC. cannot be held responsible for site conditions. ROBINA FLOORS INC.' solid strand woven bamboo should only be installed at or above grade level. Do not install below grade level. 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 supplier immediately and arrange for replacement.** ROBINA FLOORS INC. 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. ROBINA FLOORS INC. 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 wood do not mix. Installing flooring onto a wet subfloor will most likely cause cupping, tip & edge raising, telegraphing of core and subsequent gapping. Room temperature and humidity of installation area should be consistent with normal, year-round living conditions for at least one week before installation of flooring. Optimum room temperature of 70° F and a humidity range of 30-50% is recommended during installation. 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 the flooring in the installation area for 72 hours before installation to allow flooring to adjust to room temperature. Do not store the boxes of flooring directly on concrete. These floors need adequate acclimation for moisture equalization prior to installation and should not be installed from just-opened boxes. Shuffle the boards for best visual mix of lengths and color.

## Product Acclimation

Acclimation should occur at the room temperature expected to be present before, during, and after installation. Robina Floor's Bamboo Flooring should be allowed to acclimate (inside of its unopened box) on the job site for a minimum of three (3) days. For maximum material stability, Bamboo Flooring should be installed into environments with relative humidity (RH) and temperature controls capable of maintaining the delivered moisture content of 7-9%. Please reference the following chart for correlations between RH, Temperature, and moisture content (%):

**Relative Humidity levels required to maintain below moisture content:**

RH		5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	
* F	* C	<b>Moisture content (%) of wood at above relative humidity values:</b>																			
30°	-1.1°	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3	
40°	4.4°	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.3	13.5	14.9	16.5	18.5	21.0	24.3	
50°	10.0°	1.4	2.6	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.3	11.2	12.3	13.4	14.8	16.4	18.4	20.9	24.3	
60°	15.6°	1.3	2.5	3.6	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.1	12.1	13.3	14.6	16.2	18.2	20.7	24.1	
70°	21.1°	1.3	2.5	3.5	4.5	5.4	6.2	6.9	7.7	8.5	9.2	10.1	11.0	12.0	13.1	14.4	16.0	17.9	20.5	23.9	
80°	26.7°	1.3	2.4	3.5	4.4	5.3	6.1	6.8	7.6	8.3	9.1	9.9	10.8	11.7	12.9	14.2	15.7	17.7	20.2	23.6	
90°	32.2°	1.2	2.3	3.4	4.3	5.1	5.9	6.7	7.4	8.1	8.9	9.7	10.5	11.5	12.6	13.9	15.4	17.3	19.8	23.3	
100°	37.8°	1.2	2.3	3.3	4.2	5.0	5.8	6.5	7.2	7.9	8.7	9.5	10.3	11.2	12.3	13.6	15.1	17.0	19.5	22.9	
110°	43.3°	1.1	2.2	3.2	4.0	4.9	5.6	6.3	7.0	7.7	8.4	9.2	10.0	11.0	12.0	13.2	14.7	16.6	19.1	22.4	
120°	48.9°	1.1	2.1	3.0	3.9	4.7	5.4	6.1	6.8	7.5	8.2	8.9	9.7	10.6	11.7	12.9	14.4	16.2	18.6	22.0	

From the U.S. Dept. of Agriculture "Wood Handbook — Wood as an Engineering Material" Section 3-7

It is important to note that gaps in the floor may come and go seasonally due to temperature and relative humidity changes. The amount of movement depends upon the temperature and relative humidity (bamboo, like all hardwoods, expands and contracts as its moisture content rises and falls).

## PRE-INSTALLATION SUBFLOOR REQUIREMENT

**All Subfloors must be: Dry and will remain dry:** Subfloor must remain dry year-round. Moisture content of wood sub floors must not exceed 11%. Concrete must be tested for moisture content using the Anhydrous Calcium Chloride test method, a non-invasive moisture meter, or a pin/probe moisture meter.

**Structurally sound Clean:** Thoroughly swept and free of all debris (If being glued down, 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 a Portland Based leveling patch. Concrete subfloors must be fully cured, at least 90 days old, and should have minimum 6-mil polyfilm between concrete and ground. Subfloor should be flat and level within 3/16" per 10' radius. If necessary grind high spots down and level low spots with a Portland leveling compound. All concrete should be tested for moisture prior to installation using the Anhydrous Calcium Chloride test method, a noninvasive moisture meter, or a pin/probe meter. When using a Calcium Chloride Test, the result must not exceed 3 lbs per 1000 sq. ft. in a 24 hour period. Ceramic Tile, 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. A moisture test must be performed to ensure that the slab is dry. 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. ROBINA FLOORS INC. is not responsible for site related moisture issues. For additional protection, you may want to consider applying moisture barrier compound

system. When using the glue down method Robina Floors Inc. recommends an adhesive which has a moisture barrier built in to the adhesive.

## **INSTALLATION TOOLS**

For all installation methods:

Tape measure

Tapping block (trimmed piece of flooring)

Pencil

Pry bar or pull bar

Chalk line

Wood or plastic spacers (1/2")

Crosscut power saw

3M® Blue Tape

For glue down installation (recommended), you'll also need:

Trowel per flooring adhesive manufacturer's recommendations.

For nail-down installation you will also need:

18 gauge air cleat nailer compatible with profile of the flooring material

1 ¼" – 1 ½" cleat nails

Underlayment (Felt paper or Rosin paper)

Air compressor

Acceptable subfloor types:]

CDX Underlayment Grade Plywood (at least ½" thick)

Underlayment grade particleboard (glue-down only)

OSB (at least ¾" thick)

Concrete slab (glue-down only)

Existing wood floor

Ceramic tile (glue-down only)

Resilient tile & sheet vinyl (glue-down only)

## **STARTING YOUR INSTALLATION**

**Make sure subfloor is tested for moisture first and is properly prepared.**

Since natural flooring 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 obstructions, (such as pipes and cabinets). 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 40 feet in width or 120 feet in length. For larger spans, install T-moldings or other transition pieces that allow the flooring to expand and contract. Work from several open boxes of flooring and "dry lay" the floor before permanently laying the floor. This will allow you to select the varying grains & colors and to arrange them in a harmonious pattern. It also allows you the opportunity to select out very dark/light pieces for use in hidden areas in order to create a more uniform floor. Remember, it is the installers' responsibility to determine the expectations of what the finished floor will look like with the end user first and then to cull out pieces that do not meet those expectations.

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 if the wall is out of straight.

You may want to dry lay a few rows, (no glue or nails), before starting installation to confirm your layout decision and working line. When laying flooring, stagger end joints from row to row by at least 8". 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 8" in length or less, discard it and instead cut a new plank at a random length and use it to start the next row. Always begin each row from the same side of the room.

To draw planks together, always use a tapping block (a short piece of flooring), as tapping the flooring itself will result in edge damage. For best results, flip the tapping block upside down and use the groove edge to tap the tongue edge of the plank being installed. Fit end joints tightly together before tapping long edges together. When near a wall, you can use a pry bar to pry close the side and end joints. Take care not to damage edge of flooring. Use 3M® Blue Tape to hold any pieces which might have side bow and need to be held straight & tight until the adhesive sets up.

## **GLUE DOWN INSTALLATION (RECOMMENDED)**

**Robina Floors Inc. recommends glue-down installation as the best method for installing tongue and groove solid strand woven bamboo flooring. Make sure subfloor is tested for moisture content first and is properly prepared.**

On concrete subfloors, which are on or above grade (ground level), always assume the worst even if they measure dry. We recommend taking the following installation steps to ensure a trouble-free installation:

Testing and documenting moisture content prior to installation.

Applying a sealer to the subfloor as needed. Recommended adhesive which has a moisture barrier built in to the adhesive. Follow adhesive manufacturer's instructions for proper trowel size, minimum temperature, adhesive set time and open times before beginning installation of flooring. If gluing down over cork underlayment, Robina Floors Inc. suggests using a double glue-down method. This type of installation requires the cork be glued to the subfloor and for installing the flooring to the cork underlayment. Once the spread adhesive has setup sufficiently per adhesive manufacturer's instructions, lay the first row of flooring with groove facing the wall, and continue laying flooring. Always check your working lines to be sure the floor is still aligned. Use tapping block to fit planks together, but be careful not to let installed floor move on the wet adhesive while you are working. Always leave at least

a 1/2" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space. Remember to stagger end joints from row to row at least 8" apart. When first section is finished, continue to spread adhesive and lay flooring section by section until installation is complete. Use a damp cloth to **IMMEDIATELY REMOVE ANY ADHESIVE** that gets on the flooring surface. If adhesive cannot be completely removed with a damp cloth, use the manufacturer's recommended adhesive remover. Never let flooring adhesive dry completely on the finished surface. Walk each section of flooring in order to make sure it is well bonded to the subfloor with the adhesive working time. Flooring planks on the perimeter of the room may require weight on them until adhesive cures enough to hold them down.

## **NAIL DOWN INSTALLATION**

**Make sure subfloor is tested for moisture content first and is properly prepared.**

**IMPORTANT: Due the extreme hardness of solid strand woven bamboo, particular care must be taken by the installer to ensure that the appropriate nailer, proper cleats nails, and the correct PSI settings are used to create a successful installation without damaging the floor. Robina Floors Inc. takes no responsibility for damage incurred to the floor as a result of improper installation. This includes damage to the surface or tongue of the plank.**

**Robina Floors Inc. recommends using ONLY 18 gauge cleat nailer and cleat nails 1-1/4" to 1-1/2" depending on whether the subfloor is plywood or OSB. Choice of appropriate power nailer and selection of proper PSI settings are the sole responsibility of the home owner/installer. The PSI settings can range from 65-100 so it is important to test nail a plank or planks to determine the correct PSI required to install the floor without incurring damage. Check with the power nailer manufacturer for specific PSI recommendations for installing solid strand woven bamboo flooring.**

Make sure subfloor is tested for moisture content first and is properly prepared. Use an air nailer compatible with profile of flooring material (or) a nailer of your choice. Test on a sample to make sure that nailing will not cause dimpling (localized raised edges) in the finished floor or damage to the tongue. (**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 dimpling does occur, STOP and adjust the nailer shoe and angle/place of cleat entry in order to avoid it. **ROBINA FLOORS INC. is not responsible for dimpling or damage to the tongue.** For the first and second starting rows: lay first plank inside chalk line with grooved edge toward wall. Install entire first row in the same manner. Always leave at least a 1/2" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space. In order to affix the first rows, as it is difficult to get the nail gun in place next to the wall, you will need to face nail them or glue them to the floor. If face nailing, you must fill nail holes with wood putty that matches the floor. You may wish to set these rows in mastic and glue them down rather than face nailing them and leaving unsightly nail holes which must be filled with putty to match the wood floor. After gluing down these starting rows, set weight on top of these rows and allow them to set before commencing stapling/nailing the additional rows, as nailing the adjacent rows may cause the starting rows to subsequently move. Make sure the starting rows are straight and drawn tight. 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 8" and within 2" of each end. Remember to stagger end joints from row to row at least 8" apart and use a tapping block to fit boards together. It may be necessary to face-nail in doorways or tight areas where the

nailer can't fit, (or glue down in these areas and weight them while the mastic sets). The last two rows will need to be face-nailed, (or glued down), in the same manner as the first two rows. Always make sure to visually check the installed floor as you go to ensure that the nailing is not causing dimpling on the face. **(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 dimpling does occur, STOP and adjust the stapler/nailer shoe and angle/place of staple entry in order to avoid it. **ROBINA FLOORS INC. is not responsible for dimpling.**

## **FLOATING INSTALLATION**

**Robina Floors Inc. does not recommend floating installations for Solid Strand Woven T&G Bamboo floors. Installing Solid Strand Woven Bamboo floors by means of the floating method will void your warranty.**