

## ATTENTION! READ BEFORE INSTALLING!

### COLOR VARIATION

This flooring is a natural product and color variations are to be expected. For best visual effect, shuffle planks from several cartons and do not install boards varying greatly in color next to one another.

### ACCLIMATION

As relative humidity varies in different parts of the country, acclimation of the flooring prior to installation is the most important precaution to take in order to insure a successful installation. Proper acclimation is necessary to adapt the moisture content of the flooring to the conditions of your environment. Improper acclimation can cause the floor to buckle and/or the boards to shrink or cup after installation.

### SUBFLOOR PREPARATION

Subfloor must be level, dry and free of imperfections. An uneven subfloor will make the floor feel unstable and cause premature damage.

## Glueless Hardwood and 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 USFloors toll free at 800-404-2675 (706-733-6120).

### FLOORING MATERIAL SHOULD BE INSPECTED PRIOR TO INSTALLATION

Responsibility for the suitability of USFloors flooring and accompanying products for each individual installation cannot be assumed by USFloors, since USFloors 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. USFloors will send replacement in a timely fashion.

### PRE-INSTALLATION JOBSITE REQUIREMENTS

USFLOORS cannot be held responsible for site conditions.

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.** USFLOORS 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. USFLOORS 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.

### **PRE-INSTALLATION SUBFLOOR REQUIREMENTS**

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 60 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 non-invasive 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 concrete 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. USFLOORS is not responsible for site related moisture issues.

For additional protection, you may want to consider applying moisture barrier compound system.

### **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 (3/8")
- Crosscut power saw
- 3M<sup>®</sup> Blue Tape

Acceptable subfloor types:

- CDX Underlayment Grade Plywood (at least 1/2" thick)
- Underlayment grade particleboard
- OSB (at least 3/4" thick)
- Concrete slab
- Existing wood floor
- Ceramic tile
- Resilient tile & sheet vinyl

## **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 3/8" 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 3/8" 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 3/8" 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.

## **INSTALLING GLUELESS HARDWOOD AND BAMBOO FLOORING**

**BAMBOO AND HARDWOOD FLOATING FLOORS ARE INSTALLED WITH A BUILT-IN GLUELESS INTERLOCKING SYSTEM.** The plank profile has a milled tongue and groove to interlock the adjoining boards on the floor.

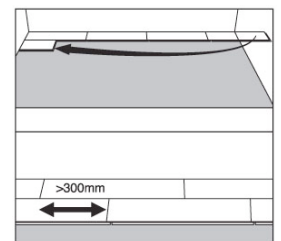
Start installing the floor in one corner (preferably parallel to the longest wall) following the direction the light falls. Install the floor from left to right.

***Always insert the tongue into the groove, not the other way around.***

**UNDERLAYMENT:** Unroll underlayment, 1 strip at a time, wall to wall. Run up the wall around the perimeter of the room, trim after floor has been installed. Over concrete slabs, a vapor barrier must be installed.

**STRING LINE:** Choose the longest wall that will be parallel to the plank floor. Tap a 3/8" from the wall at each end of the room. String a line between the nails 3/4" above floor level. Use this string as a guide-line for the first row of planks. The 3/8" space from the wall allows room for expansion. **SHUFFLE FLOORING PLANKS FOR BEST VISUAL MIX.** Mix planks from various cartons to maintain natural color and pattern variation.

**FIRST ROW:** Facing the guide-line, place the first plank at the left-hand end, ***tongue side*** facing wall, starting 3/8" off the wall. **(FIGURE 1)** It is recommended to remove the tongue from all planks lining the starting wall. Use 3/8" spacers at the end and along the wall (2 to a plank) while keeping the planks aligned with the string. Spacers keep planks from shifting when subsequent rows are added. Lock the narrow side of the next plank (use tapping block and mallet if needed). When using a tapping block, place block flat on floor, and tap gently until the ends of the two planks are firmly joined, with the joint completely closed up. **TO PREVENT EDGE DAMAGE, AVOID TAPPING DIRECTLY ON THE SIDE OF THE BOARD DURING INSTALLATION.** Continue this



**Figure 1**

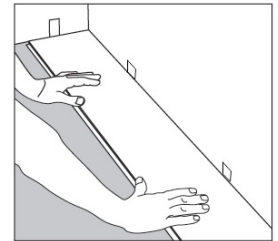
process until you reach the end wall. Cut the last plank to fit allowing for a 3/8" perimeter expansion space on all sides.

**NEXT ROWS:** If the cut-off piece from the previous row is more than 10" long it can be used to start the next row as long as end-joints between adjacent rows are always staggered by at least 10". **(FIGURE 2)**

- a) Position the long side of the plank to be installed at an angle of 20-30° to the plank already installed. **(FIGURE 3)** Move the plank to be fitted slightly up and down at the same time as exerting forward pressure. **(FIGURE 4)**
- b) Connect the sides and use a number of smaller taps on the short edge with the tapping block, until the planks lock together completely.
- c) In some cases, such as under a door frame, the planks cannot be rotated into one another. In these situations, the planks can be fitted horizontally by tapping on the edges using the tapping block. A floor pullbar might be needed for tight spaces and in this case, it is recommended to use a piece of cork underlayment between the pullbar and the plank to protect its surface. In order to cut around pipes, use a drill bit with a diameter similar to the diameter of the pipe + 3/8" for expansion.



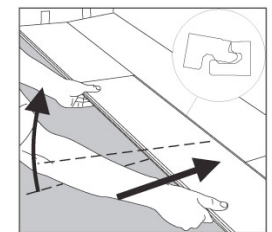
**Figure 2**



**Figure 4**

**LAST ROWS:** Usually the last row will require all planks be cut lengthwise. Measure each plank at several places along the length to ensure a proper fit. Remember to allow a 1/2" expansion space along the wall side. Use floor pull bar and mallet, again protecting the surface of the floor using a piece of cork underlayment.

**FINISH:** One of the major benefits of using the glueless interlocking system is that after installation you can immediately walk on the floor. Remove all spacer blocks. Trim the extended underlayment and polyethylene sheeting. Never attach skirting board to the floor itself, but allow space for the floor to expand and contract beneath it. In order to fill in the expansion gap around pipes and any other areas not covered by trim, use a flexible caulk.



**Figure 3**

**NOTE:** Any wood flooring, to include bamboo, will expand and contract in response to changes in temperature and humidity. There should be no more than a 2% maximum difference in moisture content between the subfloor and surface flooring material. The amount of movement varies dependant upon temperature, dimensional stability of the materials involved, and moisture content of both the surface flooring and subfloor. Visible gaps at seams and joints will vary seasonally.

#### **In-floor Radiant Heat:**

- Turn the heat off for 24 hours before, during and 24 hours after installation when installing over radiant heated subfloors.
- Failure to turn the heat off may result in shortened working time of the adhesive.
- Floor temperature must not exceed 85°F (30°C).

**Engineered flooring is best suited for installation over floors with in-floor radiant heat.**

**\*This type of installation requires a specific construction of the plywood subfloor and the installer for such must be familiar with the NWFA recommendations.**

**NWFA (National Wood Flooring Association) can be reached at 800-422-4556 U.S, or 800-848-8824 Canada.**

#### **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® 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 moldings to cover the expansion space.

- Dust mop or vacuum your floor to remove any dirt or debris.
- It is suggested that you buff the floor with lamb's wool pads in order to remove any loose splinters, residues, foot prints, etc.
- Install any transition pieces that may be needed (reducers, T-moldings, nosing. etc.).

## Protection and Maintenance of Your Floor

Lasting beauty can be achieved through purchasing a quality floor covering and providing proper on-going maintenance.

**Fading:** Natural floors contain organic pigments and are subject to fading when exposed to direct sunlight. Where possible, use drapes or other systems to protect your floor from excessive light.

**Joints:** Natural flooring reacts to the conditions in the environment. Natural flooring plank systems expand and contract in response to fluctuations in temperature and humidity. Controlling the environment, maintaining an adequate temperature and relative humidity, will minimize the visible effects of normal contraction and expansion. Optimum recommended temperature is 70°F and relative humidity is 30% - 50%. *In very dry climates, the use of a humidifier might be necessary.*

**For complete maintenance guidelines for your floor visit [www.usfloorsllc.com](http://www.usfloorsllc.com).**