Engineered Strand Bamboo Flooring

Introduction

Thank you for choosing Wellmade™ Engineered Strand Bamboo! You have selected one of the highest quality engineered floors available. Our engineered flooring is a combination of the best natural materials and state-of-the-art manufacturing technology. It features multiple layers of wood bonded together with an E1 emission (formaldehyde) compliant adhesive that exceeds all current emission standards including CARB 2012; and cross-ply laminated to provide better stability with regard to expansion/contraction. The surface layer is designed to be refinished multiple times, even though it is unlikely that this will ever be necessary. This is due to our newest, most durable finish we have ever made. Our proprietary finish system utilizing PPG® acrylated urethane finish with aluminum oxide consists of 13 layers to provide one of the most durable finishes available. Please carefully read the following in order to ensure that you know what to expect, and so that you can enjoy your hardwood floor for many years to come.

Please keep in mind that all hardwood flooring will scratch, dent, and change color over time. Therefore, you will need to decide if hardwood is suitable for your home or lifestyle. Because hardwood is a product of nature, you may experience shading variations. There will be shading variations within the cartons, and when installing, you should work out of several cartons, and mix them in a natural random shading pattern that is pleasing to your eye. If you find very dark or very light boards in the carton, that are not consistent with the other flooring, put them aside. These should be used in areas like closets or other areas that are not readily visible. It is the responsibility of the person installing the floor to inspect the flooring for defects and finish issues prior to installation. Should an individual piece be doubtful as to quality, do not install. Installation of the boards constitute acceptance. All wood flooring will expand and contract. Although engineered flooring is more stable than solid flooring in regard to expansion/contraction, small gaps may appear between the boards during low humidity conditions, and are considered normal. The use of stains, fillers, and putty sticks for touch-up is accepted as part of normal installation procedure. In addition, naturally occurring mineral streaks and knots are not considered defects. Scratches, dents, shading, and color changes due to oxidation or UV exposure are also considered normal for all hardwood flooring. They are not covered by our Warranty, as we cannot control the conditions under which they can occur.

Tips for a Successful Installation

1. Read all instructions/warranty first: Get all your questions answered before you start installing the floor.

2. Amount of flooring needed: Buy enough flooring to equal at least 105% of the square footage of your room, for waste allowance.

3. While it is technically not necessary to acclimate engineered flooring, it is always best to store the material in the area that it will be installed, under normal living conditions. Normal living conditions can be defined as having and maintaining a temperature between 50° - 70° and relative humidity (air) between 35% - 55%. It is recommended that humidifier/de-humidifier be used to maintain relative humidity. Our engineered flooring is kiln dried and leaves the factory between 8% - 12%. Always avoid installing the floor under very dry or very humid conditions, it is best to install when conditions are about the same as it will be most of the year. Also, when installing over radiant heat flooring, be sure to contact the system manufacturer to determine that it is compatible with hardwood flooring.

4. Be aware of moisture problems: Moisture can ruin any floor. Always look out for potential moisture problems, especially in basements and crawl spaces.

5. Checking for moisture: Use a Delmhorst J-4 (or equivalent) moisture meter for wood, or a Tramex Concrete Moisture Encounter meter (or equivalent) for concrete. You can also use a calcium chloride test for concrete. If the Tramex moisture meter is more than 4.5, or the calcium chloride test is more than 3 pounds per 1000 square feet, you will need to consult with a professional to correct the problem. Always check for moisture in at least several areas of the subfloor, as well as the flooring. The wood substrate should not be more that 13% moisture content. The moisture difference

between the subfloor and the hardwood flooring must be no more than 4%.

6. Dealing with moisture before installation: If you have or suspect moisture problems, don't install your floor yet. Contact a professional flooring installer to improve subfloor to an acceptable level of moisture.

7. To ensure a clean cut without any splintering, tape the area to be cut and/or use a fine-toothed circular saw with a carbide blade. Generally this is not necessary as it will be covered.

8. Place all nails/staples at 4 – 6 inch intervals along the tongue of the boards, and not closer than 2" from the end.

9. Room/entryway preparation: Undercut door casings are much better than trying to scribe the flooring to fit there.

10. Leave expansion gaps: Leave a 3/8" – 1/2" space at each wall, beneath door jambs, and at transitions for expansion of flooring. Base molding and transitions will cover this gap.

11. Tapping block: You can use a 6 – 8 inch scrap of flooring for this purpose. NEVER HIT FLOORING DIRECTLY AND BE CAREFUL NOT TO FRACTURE FLOOR EDGES.

12. Protect your floor from scratches; use felt pads under chairs & tables. Also, if your chairs or other furniture have rolling castors, you made need to replace with softer rubber castors. **Never push/drag furniture or appliances across the floor as they can damage the finish.** Please remember that scratches and dents are not covered by warranty.

NOT A PROBLEM:

1. Bending or bowing of the boards in length direction. These boards might be a little harder to install, but will NOT be a problem after they are installed, or in the future. They will lay flat like the others.

2. Color Variations will occur as bamboo is a natural product; you will need to work out of several boxes to ensure a pleasing shading mix.

PLEASE READ BEFORE INSTALLING

Responsibilities of the Owner/Installer:

Our engineered flooring is a natural and environmentally friendly product. If you take care to install this flooring correctly, taking all precautions suggested in this guideline, the flooring will give you many years of satisfaction. **Please note that it is always best to have your floor installed by a professional, even though it is possible to install yourself.** This is only guideline and cannot supply all the details you may encounter regarding the installation of this flooring. Detailed preparation and installation procedures are outlined by the National Wood Flooring Association's Hardwood Flooring Manual (NWFA) 1-800-422-4556 or www.nwfa.org. **Wellmade cannot be responsible for the installation under any circumstances.**

Pre-Installation Procedures/Acclimation:

Please handle, transport, and unload the flooring with care. Flooring should be stored in a dry place, with at least a four-inch air space under cartons. Flooring should not be delivered until the building has been closed in with windows and doors in place, and until cement work, plastering, painting, and all other materials are thoroughly dry. While it not necessary to acclimate engineered hardwood, it is best that the material be stored in the area in which it will be installed. In addition, the heating or cooling system should be operating and controlled at 50° – 70° for at least 72 hours before, during and maintained after installing. **Do not install in areas that are subject to extreme seasonal temperature/humidity changes where you cannot control the temperature/humidity levels.** As with all hardwood flooring, it is best if the humidity is maintained year-round to help prevent small gaps from appearing when humidity levels are very low. **Precautions should be taken if you are installing in very dry or very humid conditions.** The flooring is shipped from the factory between 8 – 10% moisture content. In some cases it will be necessary to use humidifiers or dehumidifiers to maintain the best environment for wood flooring. Please consult a professional for guidance in your area

Moisture Test: Before installing over concrete or a wooden subfloor, check it for moisture in several areas

using a wood or concrete moisture meter. You may also test concrete floors using the calcium chloride test. Also test the flooring materials. The moisture difference between the subfloor and the hardwood flooring must be no more than 4%.

Before installation, lay out the flooring where it is to be installed (that is, lay the boards down roughly as they will appear after installation), taking care to mix it in a shading pattern pleasing to your eye. Installer should inspect each plank at this time for finish and quality. Once installed, it becomes the responsibility of the installer/homeowner. Normally you will want to start your installation along the longest outside wall, and it is best if your flooring is installed perpendicular (across) to the floor joists. If possible, you will want to orientate the boards with the major source of light (windows) so that light is shining down the length of the boards, rather than across the boards. Remember that all natural flooring comes in a range of colors and shades. Our quality control procedures at the factory ensure that very few, if any defective boards are delivered to the consumer. Remove baseboards and undercut door jambs to insure a quality installation.

Recommended Areas:

Engineered flooring can be installed on, above, or below grade installation. On grade is at soil level, above grade is above the soil level, and below grade is lower than soil level (This includes all basements, including daylight basements.) When installing below grade, you must use the floating method only. Wood flooring should not be installed in wet areas such as bathrooms (with tub/shower) or mud rooms.

Crawl Space Ventilation:

Proper air circulation is important to prevent moisture build up, especially in homes with a crawl space. Vents should be open year round. Check to make sure that there is no standing water or moisture at the soil level. If moisture is present, soil should be covered with 6 mil polyethylene to prevent moisture from migrating into the wood flooring.

Acceptable Sub-Floors:

The sub-floors must be on or above grade & structurally sound. Bamboo flooring can be installed over the following sub-floors:

- Existing wood floors
- Plywood (¾" thick)
- Sheathing grade
- Oriented Strand Board (OSB - at least ¾" thick underlayment grade)
- Vinyl tile
- Concrete floors (direct glue)

DO NOT INSTALL DIRECTLY OVER PARTICLE BOARD, WAFERBOARD, PRESSED WOOD, OR FIBER BOARD, except when installing with an adhesive or floating installation system.

Sub-Floor Preparation:

The subfloor must be structurally sound and checked for moisture content. Movement and squeaks should be well fastened with ring nails or screws to the floor joists. The subfloor must be clean and free of paint, wax, oil, and other debris. In addition it must be flat and level within 3/16” inside a 10’ radius. High spots must be sanded flat and low spots must be filled with a leveling compound recommended by your dealer. On old or uneven wood floors, apply 1/4”- 5/8” plywood and ring nail or screw every 6” to avoid squeaking (it is also a good idea to glue the panels with a construction adhesive).

Radiant Heat Flooring

Engineered strand bamboo may be installed with the floating installation system over radiant heat concrete subfloors. Wood subfloors may sometimes be nailed/stapled, but be sure to refer to the system manufacturer for precautions. **Special care should be taken so as not to penetrate the tubing or mesh.** The system should be operational for at least 7 days before beginning installation. Turn off heat to allow subfloor to cool down to room temperature 3-4 hours before beginning the installation. After the installation is completed, turn on the radiant heat immediately, and **gradually** return to normal levels. The finished floor surface must not exceed 85° F (29° C) for the life of the floor. Because radiant heat creates a dry heat that can lower interior humidity levels, it may be necessary to add a humidifier to maintain the humidity level between 35-55% to prevent damage to the hardwood floor. **Please be sure to consult with the radiant heat system manufacturer to ensure that the system is compatible with hardwood flooring.**

For Creating A Random Effect:

To avoid creating a joint pattern in the floor, it is necessary to begin installation using starter boards. You can use any size of the boards to begin the first row. You will then need to start the next row with a different size board being sure to keep the end joints at least 6 - 8 inches apart. Cuts made at the opposite wall can then be used for starter boards, so as to avoid a pattern. If necessary, use pull straps (floating method) at 3 ft. intervals to hold the boards firmly together, or use blue painters tape. Be sure to allow at least a 3/8" – 1/2" expansion gap around perimeter.

Please keep in mind that tools left on the finished floor during installation will more than likely scratch the floor. It is also important that debris be removed from the finished areas immediately, and that all persons who might walk on the floor before it is finished should clean the bottom of their shoes. The more traffic you have on the floor before the installation is completed, the more likely it can be damaged.

For Adhesive Installation:

There are many suitable adhesives that may be used, if you are not a professional installer, consult with your local flooring dealer for recommendations for the proper adhesive for hardwood installation. You will need to use a **urethane adhesive**. Do not use water-based adhesives. In addition to the adhesive, some manufacturers offer moisture barrier products that may be used with their adhesive system, be sure to contact manufacturer of the adhesive for proper use. Use a chalk line and leave at least a 3/8" space (smaller rooms) along the wall for expansion. Start with only a few rows, be sure to align the boards perfectly, and then allow it to set until the boards will not move when adding additional rows. Every now and then, check to see if you are getting a good transfer of the adhesive to the back of the boards. Do not spread more adhesive than can be covered within 30-45 minutes. Roll the flooring with a 150 lb. roller to ensure adhesive transfer and adhesion to the back of hardwood boards, be sure there is not any debris on the roller which may scratch your floor. You can also "walk" the boards as you are installing. This will help insure that the boards are not "bridging" across low spots in the subfloor. It is very important that the boards be firmly attached to the subfloor. Be sure to clean up any adhesive on the surface immediately, then buff off any remaining residue with a soft cloth. Once it dries, it may be very difficult to remove and damage the finish. **Always follow adhesive manufacturers' instructions using their suggested adhesive and installation instructions for their adhesive warranty to be in effect.**

For Nail/Staple Installation:

If you are not a professional flooring installer, you will need to rent a special nailer for hardwood flooring. This tool will allow you to nail/staple the floor so that they will not show on the finished floor. **Be sure to learn how to adjust the nailer so as not to damage the tongue.** Also, be sure that the nailer is designed for or can be adjusted or shimmed for 9/16" flooring. You will need to use 1 1/4" nails/staples for this application, preferably with a 1/4" crown. **Note: For radiant heat subfloor, you should consult with system manufacturer to determine depth of tubing/mesh, so as not to risk damage.** Nails/staples should be placed about 4 – 6 inches apart, and not closer than 2 inches from the end of the plank. The first and last rows will generally need to be nailed by hand next to the wall, as the nailer will not work in these areas. Pre-drill for 6d finish nails, counter sink, and fill the nail holes with matching putty. Be sure not to place nails too close to the edge of boards so as to prevent splitting. Generally it is not necessary to use a moisture barrier over wood subfloors. If you prefer, you can use roofing felt as with any hardwood flooring. Remember to leave at least 3/8" – 1/2" expansion gap around the perimeter.

Splitting of the tongues is a problem normally related to the nailer, not the flooring. If the pressure is adjusted properly; and the nailer is designed or can be adjusted (shimmed) for a 5/8" floor so that the nail/staple is entering in the proper place, at the proper angle; and you are still splitting the tongue, you may need to go to a smaller gauge nail/staple.

For Floating Installation:

While it is not necessarily difficult to install as a floating floor, you may want to consider having a professional install by this method. Bare concrete floors require a moisture barrier of at least 6 mil polyethylene film with the sheets overlapping 6" and taped to prevent moisture migrating to the wood flooring. Use 1/8" foam padding (or other underlayment) over the moisture barrier as

recommended by your dealer. You may choose to use a 2 in 1 type underlayment (moisture & padding). You can also install over sound deadening underlayments with this method.

Floating Tongue-and-Groove Method: Apply a bead of elasticized PVAc glue that is D2 compliant (such as Titebond 2104 or equivalent), inside the upper groove on both the long and short side of the boards that will be joined to the existing boards. Use a tapping block if necessary to gently tap the boards into place, and then use installation straps if necessary, every 3 feet to ensure a tight fit. Be sure not to adjust straps/ clamps too tight as this could create a bow in the floor. A tapping block can be made with a 6" piece of scrap hardwood flooring. Remember to allow at least 3/8" – 1/2" for expansion around the perimeter walls. Do not tap on the tongue or groove directly, as you will damage the floor. **Important: Be sure to immediately remove any adhesive from the flooring surface as you are installing, then buff any residue with a soft cloth. If the adhesive is allowed to dry, it will become much more difficult to remove.**

Floating Uniclic® Method: Uniclic® is a revolutionary system for installing the flooring without using glue. Because of the unique shape of the tongue and groove, you can install the planks in two different ways:

Method A (preferred): Position the plank at a 20-30° angle to the plank already installed. Move the plank gently up and down while pushing forward. The plank will then automatically fold into place. You can either insert the tongue into the groove or the groove on to the tongue. The tongue in groove method is most common, and also the easiest. Never force the plank to lay flat, always help it to fold into position. **See Diagrams A-1, A-2 & A-3.**

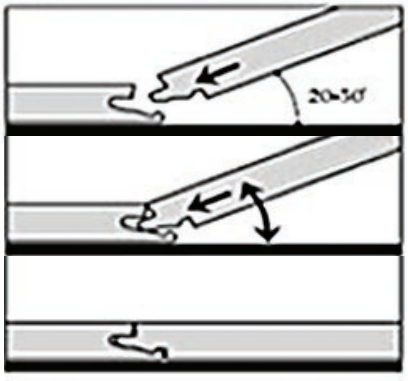

Diagram A-1

Diagram A-2

Diagram A-3

Method B: You can also tap the planks into place with a tapping block and hammer without lifting the planks. For this method you will need a special tapping block designed for 3/8 inch (9mm) flooring. The planks should not be tapped together with a single tap. To avoid damaging the plank, you must tap them together gradually. **See Diagrams B-1 and B-2.**

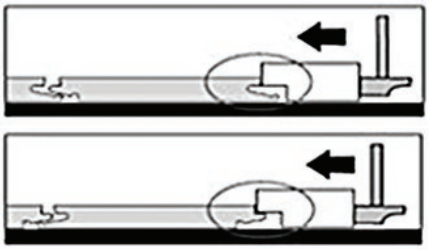

Diagram B-1

Diagram B-2

Method C: With our new fold-down end joints, you simply line up the ends of the two boards **(Diagrams C-1 & C-2)** with the tongue of the long side of the plank inserted into the groove, then lower into place **(Diagram C-1)**. When working towards a door frame and need to install under it, lay the final piece flat with the tongue of the short end of the plank in the groove, slide in as far as possible with your hands, and then use a tapping block and gently tap into the final position **(Diagram C-3)**. An alternate method that would be easier - would be to start the new row under the door frame. Position the plank so that ends in the proper spot under the door (remember to leave room for expansion/contraction), and use a tapping block to gently tap into place **(Diagram C-4)**; then continue installing the planks normally to finish the row.

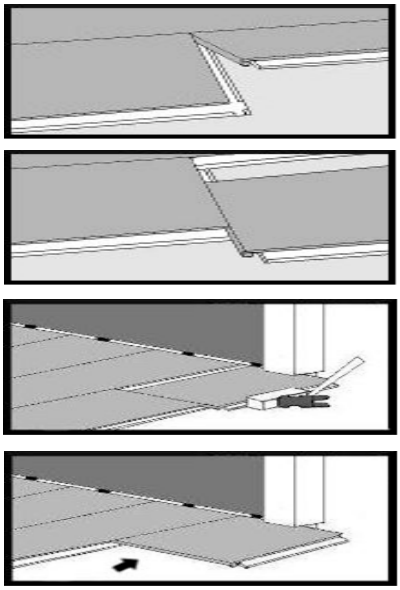

Diagram C-1

Diagram C-2

Diagram C-3

Diagram C-4

Finishing The Job:

Inspect your work, as it will cost you more if you have to come back to do a repair later. Replace original baseboards, or install matching hardwood baseboard. Install matching transitions as needed or recommended by your dealer or installer. It is not recommended or necessary to seal this floor after installation. **Protect your floor from scratches by using felt pads on chair legs or furniture feet. Plastic rollers/castors can damage your flooring; if necessary try to replace with softer rubber wheels/castors. When moving heavy items like refrigerators, use at least two sheets of 1/4" masonite or plywood while moving (sliding the appliance from one sheet to the next) to protect the flooring against scratching and denting.**

Congratulations!

You have just installed an environmentally friendly, beautiful, and elegant strand bamboo engineered floor!