

Installation Instructions -Engineered Bamboo Flooring

Engineered bamboo flooring is a versatile alternative to solid bamboo flooring due to its stability. Solid bamboo flooring typically expands and contracts across the width of the boards when exposed to changes in humidity whereas engineered flooring has a cross-ply construction that minimizes movement when humidity changes occur. This type of construction is dimensionally stable thereby allowing the flooring to be installed below grade as well as on grade and above.

GreenWood's engineered bamboo has a multi-ply construction and can be installed over most sub-floors. This flooring has been shipped from the factory with a 8-11% moisture content (+/- 2%). See our information and installation guidelines below.

ALL materials must be carefully inspected before installation. Bamboo is a natural product containing characteristics such as variations in color and graining. Mother Nature is anything but consistent and species will differ in the amount of color and grain variations. It is the customer's and the installer's responsibility for final inspection prior to installation. When installing a pre-finished bamboo floor, be sure to blend the bamboo from several cartons to ensure a good grain and shading mixture throughout the installation.

Warranties do not cover materials with visible defects once they are installed. Variation in color and grain pattern is NOT considered a defect. The National Wood Flooring Association's standard for "off quality" product is 5%. The installer can use some of these pieces as starter planks or in places such as under refrigerators or closets where small defects will not be noticed.

TOOLS:

Basic tools used in all types of wood installations are required. A preferred nail gun is a Bostitch Floor Runner (LHF97125 -2 or LHF 3297 -2) with 1 1/4", 20 gauge staples or a Power Nailer models #200 or #250 (using the 1/2" adapter) with 1 1/4" or 1 1/2" cleats. Improper use of a power nailer or installation straps can mark the edges of the flooring. Wood flooring straps are usually required for a glue-down installation. (Don't use straps made for laminate material)

JOB SITE CONDITIONS:

IT IS THE INSTALLER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF INSTALLATION BASED ON ENVIRONMENTAL AND STRUCTURAL CONDITIONS. ALL SUB-FLOORS MUST BE CLEAN, DRY, LEVEL (3/16" - 10 FOOT RADIUS; 1/8" - 6 FOOT RADIUS) AND STRUCTURALLY STABLE.

The following are some items that should be in place prior to installation

EXTERIOR CONDITIONS:

1. Gutters and downspouts should be placed to drain water away from the building. The same caution applies to sprinkler systems that should be pointed away from the structure.
2. Soil surrounding the structure should be graded properly to drain water away from the site.
3. The driveway and sidewalks should be paved.

CONCRETE SLAB:

1. The concrete slab should have been installed for at least 60 days.
2. A vapor barrier should have been installed under the slab.
3. Moisture testing of the slab should not take place before 60 days after pouring the concrete. A calcium chloride test should show less than three (3) pounds of moisture vapor emission per 1,000 square feet before the wood is installed.

INTERIOR CONDITIONS:

1. All "wet trades" including painters should have completed their work.
2. The building should be enclosed and weather tight with heating, air conditioning and ventilation systems complete and operating for at least 48 hours prior to installation.
3. If there is a crawl space, a 6-mil minimum black polyfilm must be installed over the entire ground area. Joints should be overlapped and taped.
4. The temperature should be between 60 to 80 degrees with the relative humidity between 30 and 50 percent.
5. If there is a wood sub-floor, the moisture content must be within 4 percent of the bamboo flooring.

Lightweight Concrete:

Lightweight concrete that has a dry density of 100 pounds or less per cubic foot is not suitable for engineered bamboo floors. To test for lightweight concrete, scrape a coin or key across the surface of the subfloor. If the surface powders easily or has a dry density of 100 pounds or less per cubic foot, do not install our engineered wood floor

Wood Sub-floors:

Wood sub-floors need to be nailed or secured with screws. The sub-floor should not exceed 12% moisture prior to installation. If the sub-floor is single layer and less than 3/4" thick, add a single cross layer for strength and stability (minimum 5/16" thick for a total 1" thickness). Underlayment grade OSB is a suitable sub-floor. Particleboard is not an acceptable sub-floor for staple or nail down installation but can be used as a sub-floor in glue down installations. When installing over existing wood flooring, install at right angles to the existing floor.

Sub-floors Other Than Wood or Concrete:

Perimeter glued resilient vinyl and rubber tiles are unacceptable underlyments and must be removed. Terrazzo, tile and any other hard surfaces that are dry, structurally sound and level are suitable as a subfloor for our engineered bamboo flooring. The surface must be sound, tight and free of paint, oil, adhesive, wax, grease and dirt. Terrazzo, ceramic tile or any smooth, sealed surface must be scuffed to assure adhesive bonding.

Radiant Heated Sub-floors:

Before installing over a radiant heated floor, turn off the heat and wait until the floor has reached room temperature. After installing the floor, gradually return the heat to the previous setting. When radiant heat is installed in concrete or mortar beds, it is very important to operate the heating system until these beds are completely dry before installing your bamboo flooring. Operate the heating system until the humidity in the structure stabilizes to the average level expected for the area in which the bamboo floor will be installed. Then allow the bamboo to acclimate to this humidity level before installation. The sub-floor surface must never exceed 85 F. in temperature.

Acclimation:

Except for areas that are very dry, little or no acclimation is required. In areas that are constantly very dry, the bamboo flooring will need to lose some of its moisture content prior to installation. To acclimate, store the boxes in the area where it will be installed for 3-5 days or until the moisture content is reduced to within 6-8% (25-50% relative humidity).

GLUE DOWN INSTALLATION:

There are two ways to install when using urethane adhesive; wet lay or dry lay:

1. Wet lay, meaning to lay directly into wet adhesive, is typically the quickest method for installing, and
2. Dry lay, meaning to allow the adhesive to flash or to tack up, which provides a green grab and less opportunity for floor movement prior to curing.

When using urethane adhesive, either method is acceptable. Note: The dry lay method is recommended in high humidity areas or when installing over existing sheet vinyl or non-porous material. Follow all guidelines whether you choose to install using the dry or wet method.

Wet Lay Method:

- Select a starter wall. It is recommended to start the installation along an exterior wall; it's more likely to be straight and square with the room. Measure out from the wall the width of two planks, mark each end of the room and snap your chalk line. To ensure alignment, secure a straight edge on the chalk line before spreading the adhesive. This is a critical part of the installation since this will prevent side movement of the planks that can cause misalignment. **Installing the starter row correctly is extremely important. If this is not perfect, the job will not be acceptable.**
- Install the first row of starter planks with the tongue side of the plank facing the straight edge and secure into position. Pull the planks tight together at seams and tape with 3M Blue Masking Tape to prevent movement.
- After the starter rows are secure, spread approximately 18-24" of adhesive the length of the initial row. Never spread more adhesive than can be covered. Follow the open time recommendation listed in the instructions on the adhesive label.
- Place tongue into groove and press firmly into adhesive. Never slide planks through adhesive.
- Never work on top of the flooring when installing with the wet lay method.

Dry Lay Method:

- Start by selecting your starter wall and measure out from the wall 30" when installing our 4-7/8" wide planks. Snap chalk line. Apply adhesive from the chalk line out 1½". When using the urethane adhesive, allow it to flash as per the instructions. Secure your starter rows with a straight edge (2' X 4'). Install planks and secure with 3M Blue Mask Tape as you continue throughout your installation. If you must work on top of newly laid flooring, use a kneeling board.

NAIL DOWN INSTALLATION:

Before installation of the engineered flooring begins, install a 6-mil polyethylene layer or 15 pound roofing or resin paper.

- When installing the planks, you must staple or nail 1"-2" from the ends and every 4"-6" along the edges. This will help insure a satisfactory installation. It is best to set the compressor PSI at 80-85 pounds to keep the staples from going through or breaking the tongues. Improper stapling techniques can cause squeaks in the floor.
- Place the planks with the tongue facing away from the wall. Use brads or small finishing nails to secure (face nail) the first starter row along the wall edge 1"-2" from the ends and every 4"-6" along the side. Countersink the nails and finish with filler.
- Blind nail at a 45-degree angle through the tongue. Nail 1"-2" from the ends and every 4"-6" along the sides. It will be necessary to blind nail the next 2 rows. A Stanley BT35 brad nailer with 1"-1"-/38" brads can also be used to blind nail. Continue the installation using the engineered flooring stapler. Nail or staple the flooring 1"-2" from the end and every 4"-6" along the edge tongue.