



Engineered Bamboo Installation Instructions

Glue or Floating Installation: Lock and Go Flooring can be installed over most sub-floors, and are engineered to be very dimensionally stable, making them suitable for installation over all grade levels (see information below for installation guidelines).

ATTENTION-INSTALLER/OWNER RESPONSIBILITY

Inspect "all" materials carefully before installation. Bamboo is a natural product containing variations in color, tone and graining. Some variation in color is to be expected in a natural bamboo floor. Beautiful floors are a product of nature and therefore not perfect. These floors are manufactured in accordance with accepted industry standards, which permit a defect tolerance of 5%. Even though our product goes through many inspections before it leave the plant, it is the responsibility of the customer and installer to perform a final inspection prior to installation. Make sure before installing any flooring you open 2 boxes of material so that owner can verify this is the correct product purchased. If the product is not deemed correct stop the installation and verify with retailer the correct goods were ordered.

Any warranties offered with this product do not cover materials with visible defects once the product is installed. We strongly recommend that you visit the NWFA website at bamboofloors.org/consumer for installation help and maintenance tips.

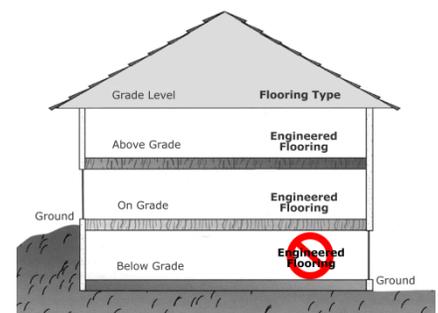
TOOLS

Basic tools and accessories: broom or vacuum, chalk line, tapping block, floor cleaner, hand or electric jamb saw, miter saw, moisture meter, safety glasses, straight edge, table saw, tape measure, square, utility knife, pry bar and underlayment (for floating installations).

Use Lock and Go Flooring Urethane flooring adhesive 1101 or 1165; or Bostik's Urethane Adhesive, towels and a trowel if gluing, and proper adhesive remover.

JOB SITE CONDITIONS

It is the responsibility of the installer/owner to determine if the job site sub floor and job site conditions are environmentally and structurally acceptable for bamboo floor installation. The installer/owner is responsible for bamboo failure resulting from or connected with sub floor, subsurface, job site damage or deficiencies after the bamboo flooring has been installed. See NWFA guidelines.



SUB-FLOOR PREPARATION AND RECOMMENDATIONS FOR ALL INSTALLATIONS

Concrete Sub-Floors

New concrete slabs require a minimum of 60 days drying time before covering them with a floor.

Lightweight Concrete

Lightweight concrete has a dry density of 100 pounds or less per cubic foot and is only suitable for engineered wood floors when using the floating installation method. Many products have been developed as self-leveling toppings or floor underlayment. These include cellular concrete, resin reinforced cementations, underlayments and gypsum-base materials. Although some of these products may have the necessary qualifications of

underlayment for wood flooring installation, others do not. To test for lightweight concrete, scrape a coin or key across the surface of the sub-floor. If the surface powders easily or has a dry density of 100 pounds or less per cubic foot, use only the floating installation method.

All concrete sub-floors must be dry, smooth (level with 3/16" in a 10' radius or 1/8" in 6') and free of structural defects. Hand scrape or sand with a 20 grit (#3 1/2) open face paper to remove loose, flaky concrete. Grind high spots in concrete and fill low spots with a Portland based leveling compound (min. 3000 psi).

Concrete must be free of paint, oil, existing adhesives, wax, grease, dirt and curing compounds. These may be removed chemically or mechanically, but do not use solvent-based strippers under any circumstances. The use of residual solvents can prohibit the satisfactory bond of flooring adhesives. It is important to ensure a proper bond between the adhesive, concrete and wood panels. A simple check for check for a properly prepared subfloor is pour teaspoon of water on the slab. It should penetrate in within 20-30 seconds. If the water stays beaded on the surface of the slab a sealer or bond breaker could be present. Further slab preparation is required.

Engineered bamboo flooring may be installed on grade, above grade where moisture conditions do not exist. To ensure a long lasting bond, make sure the perimeter of the foundation has adequate drainage and vapor barrier.

Wood Sub Floor

Wood sub-floors need to well nailed or secured with screws. Nails should be shanks and screws need to counter sunk. The wood sub floor needs to be structurally sound and dry. It should not exceed 14% moisture prior to installation. If the sub floor is single layer but less the 3/4" thick, add a single cross layer for strength and stability (minimum 5/16" thick for a total 1" thickness). This is to reduce the possibility of squeaking.

Wood sub floors must be free of paint, oil, existing adhesive, wax, grease, dirt, urethane, varnish, etc. Underlayment grade OSB (not the wax side) is also a suitable sub floor. Particle board 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 Floor Moisture Check

Use Lock and Go Flooring Urethane wood flooring adhesive 1101 or 1165; or Bostik Urethane Adhesive, can be used for above, or on grade applications and on all common substrates. On and below grade applications are susceptible to moisture and should be tested for moisture prior to installation in several locations within the installation area. Acceptable conditions for above, on and below grade applications are:

- Less than 3 lbs./1000 sf / 24 hrs on calcium chloride test
- A "DRY SLAB", AS DEFINED BY THIS TEST, CAN BE WET AT OTHER TIMES OF THE YEAR. THIS ASTM F1869 TEST DOES NOT GUARANTEE A DRY SLAB.

To correct any sub floor problems concerning moisture, either wait until the sub floor dries to meet specifications or use appropriate moisture barrier.

Other Sub Floors

Perimeter glued resilient vinyl and rubber tiles are unacceptable underlayments and must be removed. Terrazzo, tile and any other hard surfaces that are dry, structurally sound and level, as described above, are suitable as a sub floor.

INTERLOCKING ENGINEERED BAMBOO FLOORING INSTALLATION

As above, the surface must be sound, tight and free of paint, oil, existing adhesives, wax, grease and dirt. Terrazzo and ceramic tile must be abraded to assure adhesion. **Warning!** Do not sand existing resilient tile, sheet flooring, and backing or felt linings. These products may contain asbestos fibers that are not readily identifiable. Inhalation of asbestos dust can cause serious bodily harm. Check with local, state and federal

laws before handling hazardous material and before attempting the removal of these floors. Floating a floor over these subfloors types is a suitable process.

Radiant Heated Sub Floors

Do not use over any radiant heated floors!

Preparation

Remove all moldings and wall base and undercut all door casings with a hand or power jam saw using a scrap piece of flooring as a guide.

"Racking the Floor"

Start by using random length strips from the carton or by cutting four to five strips in random lengths, differing by at least 9". As you continue working across the floor be sure to maintain the 9" minimum stagger between end joints on all adjacent rows. Never waste material; use the left over pieces from the cuts to start the next row or to complete a row.

Note: 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. Bamboo flooring does have a natural color variation like most hardwood floors.

GLUE DOWN INSTALLATION GUIDELINES

There are several ways to install using glue down method such as wet lay or tacked. **Caution:** It is important to follow all guidelines set by the adhesive manufacturer for the glue down method you choose. By not adhering to the guidelines you can void your flooring warranty.

Step 1:

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 strips plus 1/2" and mark each end of the room and snap your chalk line. Make sure you have a full 1/2" along the wall lines this is your expansion gap. Proper expansion is imperative to have on all 4 walls.

Step 2:

Spread adhesive from the chalk line to the starter wall using the adhesive manufacturer's recommended trowel. It is important to use the correct trowel at an angle to get the proper spread of adhesive applied to the sub floor, which will produce a proper and permanent bond. Improper bonding can cause loose or hollow spots. Note: Change the trowel every 800 square feet due to wear down of the notches. This assures you always get the proper spread of adhesive.

Step 3:

Install the first row of starter strips with the tongue facing the starter wall and secure into position. Alignment is critical and can be achieved by top nailing the first row with finishing nails (wood sub-floor) or sprig/pin nails (concrete sub floor). This prevents slippage of the strips that can cause misalignment.

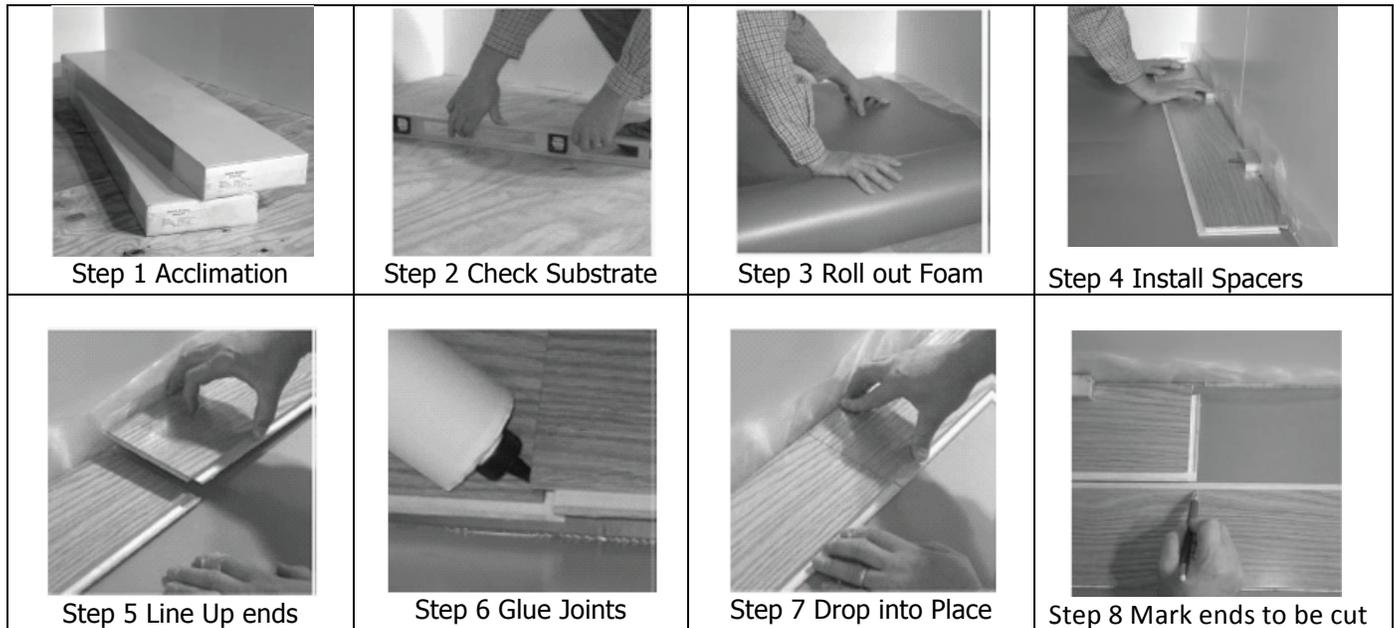
Step 4:

Once the starter rows are secure, spread 2 1/2 to 3 feet of adhesive the length of the room. (Never lay more adhesive than can be covered in approximately 2 hours.) Place the tongue into the groove into the groove of the first row and press firmly into adhesive. Never slide strips through adhesive.

Test for proper bond by occasionally lifting a board and looking for good coverage (90%) and then replace it into the adhesive. Clean any adhesive off the surface before it cures using proper manufacturers' cleaner. Use mineral spirits before the finish sets.

FLOATING INSTALLATION GUIDELINES

When floating a start by rolling out Lock and Go Flooring underlayment (Ultimate Underlayment or 3 and 1 Underlayment). All flooring installations must use an approved underlayment. In a floating installation, a ½" expansion gap must be maintained around the perimeter of the room. (See corresponding photos for a step-by-step illustration of the following floating installation instructions.)



After allowing the floor to acclimate (Step 1) and ensuring that proper sub floor requirements are met (Step 2), you may begin the installation by laying the underlayment (Step 3). As you lay the first plank, use spacers to maintain the minimum ½" expansion gap around the perimeter of the room (Step 4). Then lay the butt seams into each other for the first row, using a bead of glue at the end seams as needed (Steps 5-7). The cut piece from the first row (which is at least 9" long) will be used to start the second row (Steps 8-10). Be sure to always stagger the end seams a minimum of 9".

To begin the second row, place the tongue of the cut piece into the groove and lock down into place (Step 11). Place the second board of the second row into the groove and lock down into place. The butt seams will be held down by the following rows. It is only necessary to glue the end seams within the first and last row of the installation. The last row will be cut to fit (Step 12) and should be wider than two inches. The end seams of the last row should be glued (Step 13). Install the proper trim molding at the doorways to achieve the transition and along the walls to cover the edges of any gaps along the wall due to irregularity.

MAINTENANCE

Engineered bamboo floors are very easy to maintain. Simply use a wood cleaner and a special terry cloth floor duster, which is available from most flooring retailers. Recommended cleaning systems are Bona Kemi or Woodwise cleaning system. **NEVER WET MOP YOUR WOOD FLOORS.**

Step 1:

Vacuum or sweep your floor to remove any particles that could scratch your floor. **Warning:** Vacuum with a beater bar or power rotary brush head can damage a wood floor and should never be used. Use a vacuum with a soft bristle brush tool.

Step 2:

Apply the wood cleaner directly to the terry cloth duster, not to the floor.

Step 3:

Move the duster over the floor (with the grain of the floor) using a back and forth motion. When the terry cloth becomes soiled, simply replace it with a clean one. Cleaning the floor with a soiled cover could cause

streaking. The covers are reusable so simply throw the cover in the wash and dry it as you would any towel. Follow the manufacturer's washing instructions.

Tips & Warnings:

- Never wet or damp mop your floors. Water can damage them.
- Vacuum, dust or sweep regularly
- Remove spills promptly using a wood cleaner and a clean cloth.
- Use felt protectors under heavy pieces of furniture and chairs.
- Use protective mats at all exterior entrances.
- Spiked heels and shoes in need of repair can damage your floor.
- Never use oil soaps, wax or other household products to clean your floor.
- Bamboo is a natural product that is affected by the sun. Expect that over time the sun's UV rays can change the color of your floor.
- Keep animal's nails trimmed. Animal claws can leave scratch marks in the finish and dent the floor.
- Protect your floor when using a dolly for moving furniture or appliances'. Never slide or roll heavy furniture or appliances across the floor.
- If your floor becomes scratched or dull, repairs can often be made using repair accessories.
- The use of color coordinated wood floor putty to cover small cracks and gaps is considered normal in bamboo flooring installations.
- Molding Tip: Before installation, match the closest bamboo board in color and grain to the adjoining profile, color and grain. Save the board(s) and use next to the molding piece.
- Secure molding using Bostik's 1100FS.