



FLOATING FLOOR INSTALLATION GUIDELINES

Thoroughly examine the flooring prior to installation for grade, color, finish and quality. Ensure adequate lighting for proper inspection. If flooring is not acceptable, do not install the floor. Please contact the seller immediately and arrange for replacement. The NWFA states that up to 5% of material may be culled for blemishes or defects without being considered defective. Please note our products contain a standard pattern variation and installers should be working from multiple open boxes to ensure boards are blended throughout. The manufacturer cannot accept responsibility for installation of flooring with visible defects. Installation of this product warrants the acceptance by the installer or owner for the quality of the material, as well as conditions in which the material is being installed therein.

It is the **Installer/Owner responsibility** to ensure that the conditions are acceptable prior to the installation of the hardwood floors. The manufacturer declines any and all problems associated with the hardwood flooring that are related to or attributed to improper jobsite conditions. Any splits, cracks, grain raising, checking, edge fracturing, splintering, cupping, crowning/peaking, warping, twisting, expansion/contraction, buckling or chipping that occurs during or after the floor has been installed and as a result of abuse, misuse, improper maintenance or care, exposure to excessive or insufficient moisture, improper environmental conditions including excessive heat from radiant heat systems are not covered under the manufacturer's warranty. Prior to installation of any flooring, the installer must ensure that the jobsite and subfloor meet the requirements of these installation instructions. All necessary accessories, including trim, must be present at the jobsite prior to beginning installation. The manufacturer is not responsible for flooring failure resulting from unsatisfactory



jobsite and/or subfloor conditions. When purchasing flooring, per NWFA guidelines we recommend adding 5%-15% to actual square footage needed for cutting allowance and to compensate for culled material. It is acceptable, per the NWFA guidelines, that up to 5% of material be outside the range of acceptance. It shall be the responsibility of the Installer to document installation date, product SKU and Lot information, duration of product acclimation, flooring moisture content, subfloor moisture content, site relative humidity and site temperature. This information must be documented by the installer and a copy provided to the property owner to ensure product warranty coverage.

TOOLS AND SUPPLIES NEEDED

Foam underlay, adhesive or glue, spacers, saw, hammer, rubber mallet, utility knife, pencil, tape measure, wood putty/color matched filler, safety glasses, filter mask, ear plugs.

JOBSITE & PRE-INSTALLATION GUIDELINES

Bamboo flooring should be one of the last items installed for any new construction or remodel project. All Bamboo flooring must be installed per the manufacturers and NWFA installation guidelines. For more information about NWFA guidelines please contact www.NWFA.org or to speak directly to a NWFA representative please contact 500-443-WOOD (9663). Please note there may be a fee for this service.

- All “wet” work – i.e. – paint, drywall, concrete, masonry, plumbing must be complete and dry prior to the delivery of hardwood flooring
- Gutters and downspouts should be in place and the exterior grade complete to allow for proper drainage of water away from the building’s exterior perimeter.
- HVAC should be on, operational and maintained between 60 – 80 degrees with a relative humidity of 35%- 55% range a minimum of 5 days prior to delivery, during and after installation of the flooring.



- Test wood sub floors and wood flooring for moisture content using moisture meter recommended for bamboo flooring, such as Ligomat SDM or comparable. Take readings of the subfloor – minimum of 20 readings per 1000 sq. ft. and average the results. In most regions, a “dry” subfloor that is ready to work on has a moisture content of 12% or less and the wood should be within 2% for planks greater than 3” wide and 4% for planks less than 3” wide of the subfloor’s moisture content. Please refer to the NWFA moisture content by area map for specific requirements.
- Test the concrete subfloors moisture content by calcium chloride testing or by using an appropriate moisture meter. The moisture content for concrete subfloors registered after a calcium chloride test should not be greater than 3 pounds per 1000 square feet of area. If it exceeds these limits, DO NOT install the flooring. Before moisture testing begins, the slab must be cured for a minimum of 30 days. The moisture vapor emission rate for concrete subfloors must not exceed 75% RH using ASTM 2170 or 3 pounds per 1000sqft per 24 hours using Calcium Chloride test ASTM 1869. If using a moisture meter, please refer to the recommended guidelines set forth for by that moisture meters’ manufacturer.
- Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist to be no less than 18” and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation in accordance with local regulations.

ALWAYS CHECK MOISTURE LEVELS BEFORE INSTALLING

Preparing and leveling the sub-floor:

1. The subfloor needs to be structurally sound; do not install over particle board. Please refer to NWFA guidelines for sound substrate qualifications.
2. The sub-floor should be free of any surface defect. If it is not, fill gaps with a Portland- based leveling cement (for concrete floors only) or sand/grind down any uneven areas. For wood floors, use a wood leveling patch or skim coat as needed.



3. The sub-floor must be level and flat to 3/16" (5mm) per 10' radius or 1/8" (3.2mm) per 6- foot radius.
4. Any gaps in the sub-floor should not exceed 3/16" (5mm).
5. Use flooring screws into floor joists if necessary, to minimize squeaks in subfloor.
6. The surface must be clean and free of any contaminants such as wax, paint, grease, dust, oil, nails, staples, old adhesive, etc. and thoroughly swept and free of all debris.
7. For concrete installation, ensure that the concrete is not low-density (below 3000 psi) or gypsum based.
8. Plywood must be CDX-rated at least 3/4" thick. OSB must be 3/4", PS2 rated, and installed sealed-side down.
9. Moisture content should not exceed 12%

ACCLIMATION

- Store this flooring at the installation area before installation to allow the flooring to acclimate and adjust to room temperature and humidity.
- Do not install the flooring until the moisture content of the subfloor where the flooring will be installed is within 2% for planks greater than 3" wide and 4% for planks less than 3" wide from the moisture content of the flooring.
- If you do not allow the flooring sufficient time to acclimate and the moisture content of the flooring exceeds that of the subfloor, the flooring will continue to contract after installation and gaps may develop between the flooring. Likewise, if the moisture content of the flooring is less than that of the subfloor, the flooring may expand and/or cupping may develop.

BLENDING OF CARTONS

To achieve a uniform appearance across the entire floor, we require that you open and work from a minimum of four cartons at a time and lay out the flooring ahead of time. Be sure to mix the planks for the best aesthetic appearance. Make



certain the room is well lit to ensure color is consistent and that any visual defects can be seen and removed prior to installation.

We require any installation of this floor that is installed in the floating method to use a T- Molding once the installation has gone more than 26 feet in a single direction. Installations of the flooring beyond this distance must use a T- Molding to release stress from the floor and allow the floating installation to properly expand and contract. T-moldings are also required in narrow flooring areas 36" or less in width; floor areas interrupted by wall sections extending out of the wall, including cabinets; floor areas which are not rectangular; wall openings-with or without a door; L shaped rooms or otherwise not rectangular rooms will require T-moldings to split into rectangular sections. Failure to use appropriate T-moldings will void warranty coverage.

LAYOUT OF FLOORING

"Racking the Floor" is essential to achieve a random appearance. Start by cutting several boards in random lengths, differing the lengths by at least six inches. As you continue working across the floor remember to maintain a six-inch minimum space between the end joints.

Randomly install different lengths to avoid a patterned appearance. Never waste materials; the end cuts from starter rows should be used at the opposite side of the room to complete rows or may be used to start the next row.

EXPANSION SPACE

An expansion space of 1/2" must be left around the perimeter of the room and at all vertical obstructions. More or less spacing may be needed depending on the geographical region, interior climate, and or time of the year. Your bamboo flooring WILL move/shrink/expand. This is a normal occurrence of a natural product.



FLOATING INSTALLATION INSTRUCTIONS

STEP ONE - ESTABLISH A STARTING POINT

1. Remove any existing wall base, shoe molding, quarter round or doorway threshold.
2. Prior to installing flooring, roll out 6mil poly-film with seams overlapped 8". Fasten seams every 18" -24" with duct tape or poly tape. Run the outside edges of film up the perimeter of wall. (See Fig.2)
3. If installation is above grade, poly-film is recommended, but not necessary. Roll out underlayment over 6mil poly-film and tape seams every 18" -24" with duct tape or poly tape. (See Fig.1) Determine the direction of the floor joists and run the flooring perpendicular (90°) to the floor joists. Do not run flooring parallel to floor joists.
4. Flooring may be installed in any direction over a concrete slab.

STEP TWO - LAY OUT

Choose boards and align the planks tongue towards the wall you are starting on. The first row's tongue should be removed to ensure that a proper expansion gap can be achieved. (see Fig.3) Cut the last plank to the proper length leaving a 1/2" from the end wall. Then lay out the second row, making sure to stagger the joints. The minimum end stagger is 6 inches

STEP THREE – RACK THE FLOOR

Once the first row is in place, continue to lay out the planks. Remain working from at least four open cartons. Be sure to blend the planks and stagger the end joints a minimum of 6" apart to ensure a favorable appearance. Avoid H-Joint and other repeating patterns in the floor.

STEP FOUR - INSTALLATION OF FLOORING



1. Once enough of the planks have been racked out, begin installing the planks by fitting the short side of the click system into the long side of the click system. Make sure that the click system is lightly engaged evenly. Press downward on the plank to fully engage to click system. (See Fig.A1-3) Continue installing planks across the room ending at the far wall.
2. It may be necessary to rip the last row to allow for the 1/2" expansion. If the last row is 1" or less, click the pieces to the last full uninstalled row and install them together. If needed use a light rubber mallet to make the remaining rows tight to the installed planks.

STEP FIVE - COMPLETING THE JOB

1. Clean the floor with a cleaner recommended for pre-finished hardwood floors and specialty terry cloth hardwood flooring mop available.
2. Install transition pieces -i.e. – thresholds, t-moldings, base shoe. Always secure moldings to wall, not the floor.
3. Inspect final floor for nicks and or minor gaps – fill with appropriate color wood putty/filler.
4. Any unused material should be stored in a dry place in case future repairs are needed. We recommend saving at least 2 boxes.

TIPS AND WARNINGS

- Vacuum or sweep regularly. Do not use vacuums with beater bar or power brush attachment. They could scratch the floor.
- Use walk off mats in all exterior doorways.
- Use felt protectors on the bottom of chairs and furniture.
- High heels will cause damage to wood floors.
- Keep pets' nails trimmed.
- Never slide heavy furniture or appliances across floor.
- Clean up wet spills immediately with clean, dry cloth.

- Never wet mop or damp mop your wood floors.
- Never use oil soaps, wax or other household cleaners on your wood floor.

Temperature and Humidity must be controlled in the space the floor is installed. Temperature should be between 62-73 F (17-23 C). Relative humidity should remain between 35% -65%. Gapping may occur if humidity drops below 30%

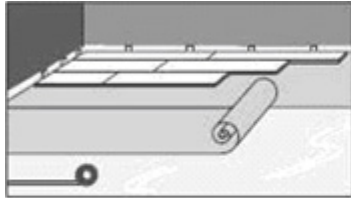


Figure 1

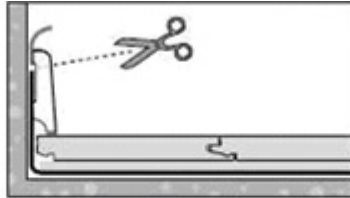


Figure 2

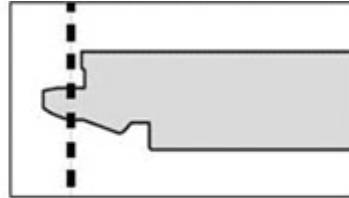


Figure 3

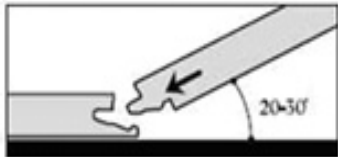


Diagram A-1

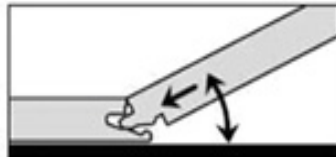


Diagram A-2



Diagram A-3