

SOLID EASY CLICK BAMBOO INSTALLTION

Prefinished solid bamboo is very easy to maintain. This flooring also includes a wide range of coordinating moldings and transition strips designed to cover the expansion space at the walls, doorways and transitions to other flooring. Save yourself time, money and frustration by completely reading these instructions. Evaluate the job site to ensure that in-home environmental conditions are acceptable for installation. Do not install flooring in wet environments such as saunas or full bathrooms subject to steam, high humidity or excess moisture. Installations outside these guidelines are viewed as experimental.



BEFORE YOU START moisture/ perimeter expansions/expansion breaks

Most installation problems are the result of a lack of expansion around fixed objects or moisture intrusion, see (Moisture Testing). Do not install this flooring in wet environments such as saunas or full bathrooms subject to steam, high humidity or excess moisture. A **perimeter expansion** space of 1/2" must be left around the walls and at all fixed objects. In addition, Solid Bamboo Easy Click floating installation requires **expansion breaks** and T-Molding transitions be installed between adjoining rooms, in hallways, and at all doorways to allow for normal independent floor movement and environmental fluctuations. No spans of floating applications can exceed **30'** in width or length without and expansion break. This requirement is not applicable when gluing this product to the subfloor. Failure to meet these requirements can result in the floor buckling, separating or finish problems.

APPLICATIONS

Floating

Solid click bamboo can be installed on every level of the home and is intended for indoor use only. It is installed as a floating floor over an approved underlayment (see floating instructions for details).

Below grade/Basements

Solid Click Bamboo can be used for below-grade or basement applications (as a floating floor only). Protect the flooring against elevated moisture from below by placing 6-8mil 100% virgin polyethylene plastic sheeting as a moisture barrier over concrete (a minimum). To protect against elevated humidity from above refer to (Acclimation details) for proper in-home environmental controls. Depending on your local in-home conditions the use of venting, humidification or dehumidification equipment to maintain the proper environment for bamboo flooring is highly recommended. Do not install this flooring in wet environments such as saunas or full bathrooms subject to steam, high humidity or excess moisture. Failure to meet these requirements can result in the floor buckling, separating or finish problems.

Glue

This product can be fully glued to approved substrates (see gluing instructions for details).

Radiant Heat

This product can be used for radiant heating applications (see details on last page).

HANDLE WITH CARE:

To prevent board warping, twisting or bowing do not store in garages or out-buildings without humidification and temperature controls. Do not store directly on bare concrete. Cartons must be placed flat inside the home, in a dry place, close to the center of the installation area as possible, provide air flow around cartons. Keep out of direct sunlight and away from air vents and exterior walls.

OVERVIEW

1. Install flooring in proper lighting
2. Inspect each plank during installation to ensure quality
3. Do not install flooring under permanent or fixed cabinetry
4. Inspect subfloor for squeaks, flatness, and moisture before installation
5. Customers are advised to be home during the installation for consultation
6. Keep a box of flooring and a product label should future repairs be needed.
7. Customer and installer should discuss installation and layout to maximize satisfaction
8. Add 5-10% to your square footage for most standard installations, 15% for diagonal installations
9. For best appearance install from several boxes, inspect every plank when removing from the carton
10. An underlayment pad is required when floating this product. **Appropriate underlayments** for these floors are: Bellawood Platinum or Premium, Eco Silent Sound, Dura Dance pad, Dream Home Cork, or similar.)
11. Excessive squeaks and gapping can result from too soft an underlayment, an uneven subfloor, excessive high or low humidity, and poor acclimation. Underlayments are optional when using the glued down installation method
12. It is required to use an approved moisture barrier or vapor retarder over concrete substrates prior to installation
13. Do not install over any carpeting, other floating floors, or wood subflooring installed directly over a concrete substrate
14. A minimum expansion space must be provided around the perimeter of the room and any fixed objects such as pipes, columns and walls. The expansion gap or space is usually the same size as the thickness of the new flooring (1/2" flooring = 1/2" gap) Door jambs and casings must be undercut to allow flooring to slide under without binding the floor.

15. **Floating installations only-** Expansion breaks allow normal floor movement independent of other connected rooms. Any room or connected areas greater than 30' feet in any direction must have expansion breaks placed into the flooring. Expansion breaks and T-Molding transitions must be installed between adjoining rooms, connections in hallways and at all doorways. Failure to meet these requirements can result in the floor buckling, separating or gapping.
16. Do not fasten fixtures to a floating floor. Anchoring bolts or fasteners must have 1/2" expansion space around bolts, pillars, pipes and other fixed objects to allow floor movement.

OWNER/INSTALLER RESPONSIBILITIES

The flooring manufacture is not responsible for failures or deficiencies of bamboo flooring resulting from jobsite conditions, jobsite environment conditions, or improper storage. Bamboo flooring is a product of nature characterized by distinctive variations in grain, pattern, and color. These **natural variations** are neither flaws or defects, but rather the natural beauty and uniqueness of bamboo, and should be expected. Only stained products will have the most uniformity in color or shade. Before beginning the installation determine if the job site and subfloor conditions are acceptable. The in-home environment, weather fluctuations and product storage can adversely affect all organic materials including bamboo flooring; refer to (Acclimation details). The customer/installer is responsible for final inspection of quality, and for moisture testing the subfloor and flooring. During installation, use reasonable selectivity and good judgment. **From a standing position** any individual board deemed unacceptable in appearance should not be used. Defects should be cut off placing the remainder in closets or near walls. If milling or quality issues are suspected stop the installation and call the manufacturer. Most manufacturers and distributors agree that a reasonable amount of installed flooring is enough to stop and determine product quality; up to (25% or 100sqft, whichever is less) of installed product is enough to determine acceptance of quality. Therefore once the flooring is completely installed it is assumed that the material is free of visual manufacturing problems and that the installation is correct. In this industry **use constitutes acceptance**, once the flooring is completely installed it is deemed appropriate for use by all parties concerned. The manufacturer shall not be responsible for costs associated with repairing or replacing flooring installed with visible defects. Our floors are manufactured in accordance with accepted industry standards that allow a defect tolerance not to exceed 5% of a manufacturing or natural type. Before installation, if more than **5%** of the purchased material is unusable contact your local store or call CUSTOMER CARE immediately. Depending on layout, board selection and cutting about 5% extra material should be added to the actual order to complete the project. Diagonal layouts or custom installations usually require an additional 15%. The use of putty, stains, filler sticks or markers to touch-up prefinished flooring during installation is considered normal practice.

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ACCLIMATION/CONDITIONING OF THE FLOORING

After harvesting, bamboo flooring is kiln-dried for optimum service. During transit, delivery and storage, bamboo flooring must be protected from moisture. Bamboo is hygroscopic, meaning its size and shape changes with the absorption or release of moisture. The amount of change varies with wood species, cut, type of flooring and work-site conditions. Therefore, bamboo movement (shrinkage or expansion) is to be properly controlled and achieved at the work-site. First, **acclimate** the new flooring in the areas to be installed to the expected environment that the floor will service while in the boxes. If products are packaged in plastic, remove the plastic wrapping from the outside of the boxes and open the ends of the boxes. If plastic is wrapped around the flooring inside of the boxes, open the box ends only, cut away plastic to speed up the acclimation process increasing air-flow. Strand bamboo can take extended time to acclimate to a new environment; however, length of acclimation time is not the determining factor. **The goal** is to reach an indoor equilibrium or balance between the core of the new flooring with its surroundings before assembly, fastening or installation. Extended conditioning is not unusual for strand bamboo species as it will slowly gain and lose moisture due to its density and finish coatings. For best performance, condition and maintain the flooring to consistent indoor temperatures of **60°-80° F** and indoor humidity levels of **30% - 50%**, before, during and after installation. Depending on your local conditions the use of a **dehumidifier** or a **humidifier** may be necessary to maintain the desired results. **Very dry or humid regions** of the country usually require extended conditioning to balance the bamboo to the environment it will service. Proper jobsite conditions, acclimation, moisture testing of the subfloor and new flooring all work together for the success of the installation, and is the responsibility of those overseeing the project. Not following the above recommendations can negatively impact board performance and can result in excessive movement, squeaks, board gapping, board-edge cupping, finish splits and other related issues. This is especially true regarding flooring placed in seasonal or **vacation homes** without proper ventilation and climate conditions.

The map of the United States below shows the average moisture content of interior wood products for each state/region. The first number indicates the average moisture content of wood in January (winter – lower humidity months), and the second number indicates the average moisture content in July (summer – higher humidity months). To calculate what the optimal wood moisture content is (baseline) add the high season and low season together, then divide by two. Example: If your region has an expected low of 6% to a high of 9%, the baseline moisture content of the wood would be 7.5%. If bamboo flooring is delivered and recorded to its baseline moisture content for the geographical location and proper relative humidity conditions are maintained, installation can begin, If the moisture content of the product received is well outside of the average moisture content of that region, extended acclimation time would be needed. **NOTE:** This map is a helpful guide for installation. Actual moisture content conditions in any location may differ significantly from these numbers. Ideal interior environmental conditions vary from region to region and jobsite to jobsite, therefore the most reliable moisture-content numbers should be obtained using a moisture meter to determine the moisture content of the product in relation to the subfloor. Some regions of the country are moderate in both temperatures and humidity, homes in these regions may not have typical HVAC heating, ventilation and air-conditioning systems to better regulate the indoor environment, therefore it is the flooring professional or users responsibility to determine and warranty if the indoor environment is suitable or not for wood floor installations.

SUMMER/WINTER MOISTURE CONTENT MAP Optimum Flooring Moisture Content (%) by U.S. Region



BEHAVIOR OF FLOORING (Continued)

Variation of average moisture content. In each pair of figures, the first is average moisture content during January and the second is average moisture content during July for wood used indoors.

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SEASONAL CHANGES - What to expect

To assure that your floors provide lasting satisfaction note these recommendations below:

Seasonal gapping should be expected in all wood products and does not constitute a product failure.

It is normal that wood products will be affected by environmental fluctuations in humidity and temperatures within a building. The relative in home humidity should be **30-50%**, with temperature of **60-80°F**. Correct acclimation will minimize plank gapping or swelling.

- **(Dry)** Heating Season - A humidifier may be needed to improve low humidity levels. Wood stoves, radiant floor heat and electric heat all create dryer conditions.
- **(Humid, Wet)** Non-Heating Season - Proper humidity levels can be maintained by use of an air conditioner or dehumidifier. Avoid excessive exposure to water during periods of inclement weather. Do not block expansion joints around the perimeter of your floor.

JOB SITE

Exterior conditions can influence home interior subfloor moisture.

1. Check water drainage from gutters, sprinklers, and drainage to adjoining properties. Changes to your home site, or incorrect building procedures, and lack of moisture protection can allow excessive water or moisture to penetrate basement walls, flow beneath concrete slabs, basement floors, and into crawl spaces.
2. SOLID BAMBOO flooring should not be installed over any floor with a sump pump or in a room with a floor drain.
3. Check specific local building codes for assistance when correcting excessive moisture
4. Yard grading; inspect the outside surroundings for improper drainage or obvious sources of moisture. The soil should slope away from the foundation (at least 1/2 inch per foot for at least 10 feet). Walkways and driveways should direct water away from the foundation. Adjoining properties should drain water away from the building site.

MOISTURE TESTING (Wood subfloor and new flooring)



Most flooring failures result from jobsite moisture. Do not unpack or deliver flooring to the jobsite until moisture problems are corrected. For floating floor installations (flooring not attached to the subfloor) the **goal** of moisture testing is two-fold, (1) to determine when the installation can begin (2) to verify the placement of dry flooring on dry subfloors. Verify by using a species specific moisture meter (**pic1**) such as; ([Tramex](#), [Ligno-Mat](#), or [Delmhorst](#)) to name a few that will have strand bamboo settings. General purpose meters may be appropriate for rough carpentry, sheetrock or lumber but are not recommended for wood flooring. Species specific, adjustable moisture meters are most accurate for bamboo and wood flooring. Contact the meter manufacturer for alternate or substitute settings.



(pic1)

Begin by **testing the subfloor**. Set the meter to the type of subfloor (obtain an average by testing 20 locations per 1000sqft) test around exterior doorways, near foundation walls and in the center of the room. On average, the subfloor moisture range must not exceed **12%**. Next, **test the new flooring**. Set the meter to the proper setting for bamboo (Obtain an average reading by testing about 5% of the new flooring). Our flooring can have acceptable moisture range between 6% minimum and 12% maximum. If high moisture readings are found in either the new floor or subfloor identify the moisture source and correct, extend acclimation time, increase ventilation. Postpone the installation until the proper conditions have been met. Should future questions arise, it is recommended in the process of installation to document moisture test results with notes, for example; record the customer's name, the order number, and take digital pictures that show the meter that was used, including the time and date.

MOISTURE TESTING (Concrete Subfloors)

Use of a Calcium Chloride Test (ASTM F-1869) is required over all concrete subfloors. Three Calcium Chloride tests are needed for the first 1,000sqft. Add one additional test for each 1,000 square feet thereafter. Contact your local Lumber Liquidators for test kits.



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MOISTURE BARRIERS

Because cement substrates can be dry today and wet later, it is always recommended to use moisture barriers.

1. Cement:

A: Floating installation, use 6 or 8-mil plastic sheeting film having an impermeable vapor retard or perm rating of less than or equal to .15, thereby limiting the passage of moisture to near zero (ASTM D-1745) Overlap all seams 4-8" inches and tape the complete seam from end to end. Run the plastic up the edge of the baseboard or wall 2" to protect the finished floor edges from possible water vapors. After installation, roll and tuck the plastic down into the side gaps or expansion space to protect the edges. Apply moisture barriers over concrete subfloors, ceramic tiles, terrazzo, kitchen vinyl or similar.

B: Glue down installation, use trowel applied solid wood flooring adhesives with built in moisture protection
(See GlueDown Overview)

2. Wood subfloors: Wood subfloors and components need to breathe. Do not use 6 or 8-mil polyethylene sheeting film vapor barrier over a wood subfloor under any circumstances.

3. Crawl spaces: When installing over a crawl space, the exposed soil or a concrete slab in the crawl space area must be completely covered by a 6 or 8-mil plastic sheeting film with seams overlapped at least 8 inches or more, and taped the entire length. Insulation should be seen between the floor joists.

FOUNDATION VENTS, vents must provide good cross ventilation without dead air space or fan assisted ventilation. Minimum vent openings equal to 1.5% of the square footage within the crawl space should be maintained. Example, 100 square feet of crawl space must have at least 1.5 square feet of open vents.



SUBFLOOR REQUIREMENTS

WOOD - basics

1. Carpet and pad must always be removed. Any existing adhesive on subfloor must also be removed.
2. Check for rot, squeaks and repair damages before beginning.
3. Subfloor surface must be flat, **1/8" within a 6'-foot radius or 3/16" in 10 feet** without dips.
4. A flat and even subfloor void of high spots is needed to ensure that the planks cannot flex at the click joints.
5. Any existing wood flooring fixed to concrete must be removed prior to installing the new floor.
6. Check for elevated subfloor moisture using a moisture meter.

7. High areas, peaked joints in the subfloor or other ridges in the wood subfloor must be sanded or planed flat and low areas repaired.

Wood subfloors

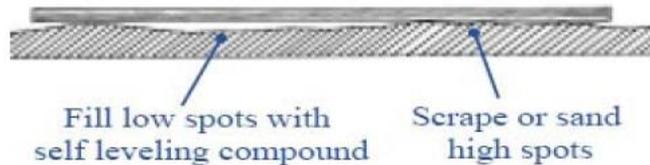
Note that joist spacing determines minimum subfloor thickness.

- Joist spacing **16"** on center **(OC) Plywood:** Minimum of (5/8") Oriented Strand Board **(OSB):** Minimum (3/4", 23/32")
- Joist spacing **16"** up to **19.2"** **(OC) Plywood:** Minimum of (3/4", 23/32") Oriented Strand Board **(OSB):** Minimum of (3/4", 23/32")
- Joist spacing over **19.2"** up to maximum **24"** **(OC) Plywood:** Minimum of (7/8") Oriented Strand Board **(OSB):** Minimum of (1")
- Do not install flooring directly over floor joist without subflooring. All structural panels/underlayment must be installed sealed-side down, and provide minimum 3/4" perimeter spacing. Square-edged or non-tongue and grooved panels used as a subfloor will require a minimum 1/8" (3 mm) expansion space placed between all plywood seams. Panels must meet minimum CDX grade Exposure 1 and US Voluntary Product Standard PS1-95, PS2-04 or Canadian performance standard CAN/CSA 0325-0-92 for construction sheathing. Check panel for codes.
- **Pressure-treated plywood** may have elevated moisture or latent with rot resistant chemicals, not for interior use.
- **Solid-board** subflooring should be 3/4" x 5 1/2" (1" x 6" nominal), Group 1 dense softwoods, No. 2 Common, kiln-dried to less than 12% percent moisture content.
- **Particleboard, Luan or Masonite** is approved for floating installations only and must be covered with a minimum of 3/8" CDX plywood when gluing this product to the subfloor.

CONCRETE -basics

1. **Always use a moisture barrier** (see types of approved underlayments and moisture barriers)
2. Any existing wood flooring fixed to concrete must be removed prior to installing.
3. Carpet and pad and existing adhesives must be removed.
4. Check for elevated moisture using a Calcium Chloride test.
5. New concrete must cure for **60 days** before any flooring is installed.
6. Do not install flooring in a room with a floor drain or sump pump.
7. Subfloor surface must be flat, **1/8" within a 6'-foot radius or 3/16" in 10 feet** without dips.
8. High spots or ridges must be ground down flat. Low areas should be filled in using a Portland cement based patching compound. Allow drying time for the leveling compounds.

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OTHER SUBFLOOR REQUIREMENTS

1. Solid Bamboo Click flooring can be floated over ceramic tiles, terrazzo, marble, VCT, linoleum, and particle board subflooring providing they are flat, sound, and dry. Check with adhesive manufacture for proper prep before gluing to tile flooring. Do not glue directly to vinyl sheet goods, linoleum and resilient (VCT) vinyl composition tile and older vinyl and linoleum tiles or sheet goods. Older vinyl sheet goods and tile may contain asbestos. Contact your local municipalities for special precautions should you choose to remove these older floor coverings.
2. For floating applications a permeable vapor barrier is always required when installing over existing vinyl, linoleum sheet goods, resilient tiles or ceramic tiles that are over a wood substrate and an impermeable (6 mil poly) when ceramic tiles are installed over concrete.

NEW CONSTRUCTION

1. The installation should be scheduled as late in the building cycle process as possible to prevent any unnecessary damage from occurring as the result of other trades involved with the construction process. Always protect the floor if other trades will be walking on the floor after installation.
2. Prior to installation, the building must be closed and the climate controls should be in normal operation for at least two weeks.
3. See specific product acclimation, site moisture and subfloor requirements.

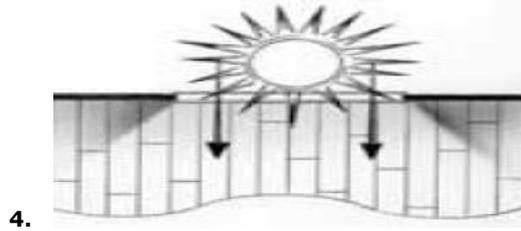
KITCHENS - BATHROOMS

1. Do not install in rooms with a floor drain or sump pump.
2. Do not install flooring in a wet environment such as saunas or full bathrooms subject to steam, high humidity or excess moisture.
3. Do not install flooring under permanent or fixed cabinetry, heavy wall-to-wall bookcases or similar that can restrict movement
4. Areas of water exposure, such as the expansion space in front of the kitchen sink, in front of or around the dishwasher, around the refrigerator space and around any water supply line, in front of any exterior doors and sliding glass doors **MUST** be sealed with 100% mildew-resistant silicone sealant.

PLANNING

We will not accept responsibility for claims on installed flooring with obvious defects.

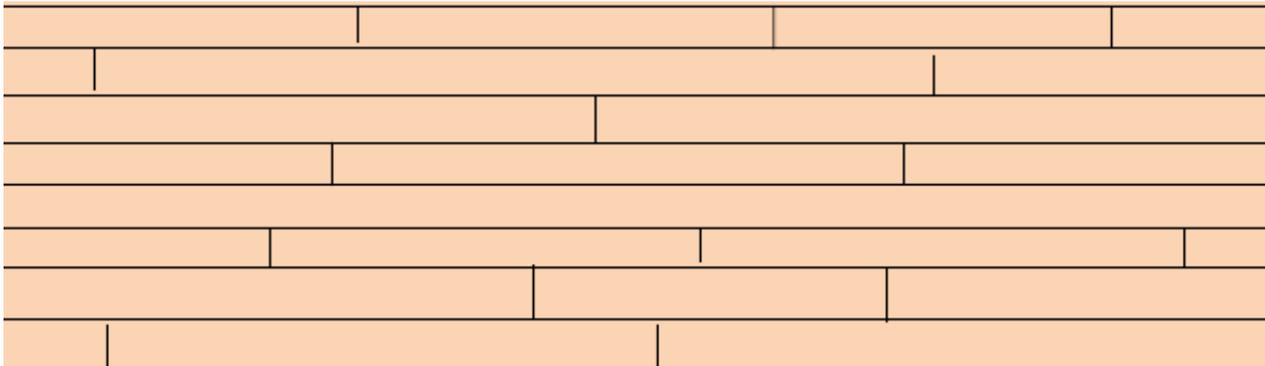
1. This flooring is intended for indoor use only. It is designed as a floating floor, but can also be glued to concrete and plywood subflooring. This floor is not recommended for nail down installation. Inspect all planks for visible defects and damage before and during installation. Do not install damaged planks. During installation, inspect the groove area for any debris that may prevent proper assembly of planks.
2. Determine in which direction the planks will be installed. To make the room appear larger or if installing in very small rooms or hallways, it is preferable to lay the planks parallel to the longest room dimension.
3. Carefully measure the room to determine squareness and the width of the first and last row of planks. If the width of the last row of planks is less than 2" excluding the tongue, adjust the width of first plank row accordingly.
4. End-joint "shadow" can be minimized by not running board direction into a primary light source.



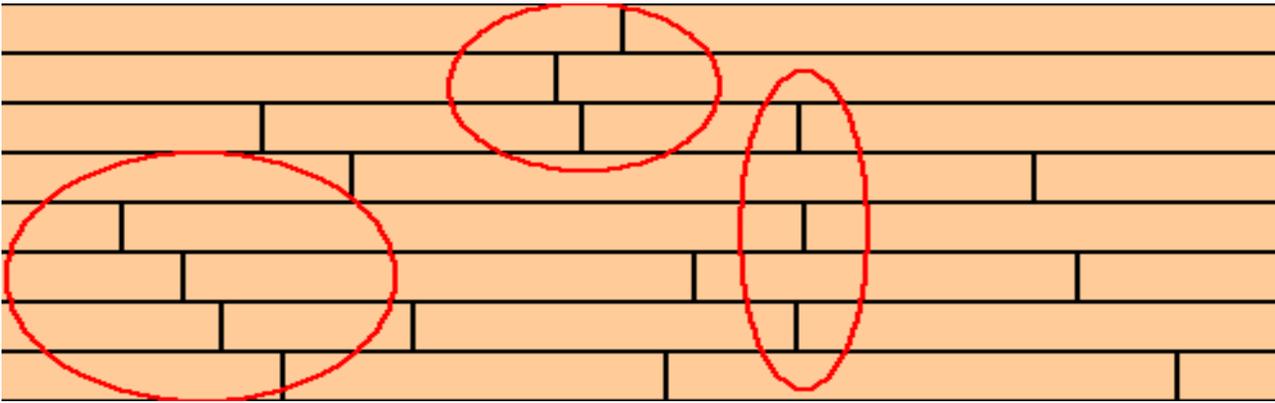
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FLOORING LAYOUT (Racking)

After installation of the first three rows, loose lay about 100sqft of flooring about 4" or 5" away from the last secured row. Pull from several boxes to mix board color and sizes to create a random look. Visually inspect flooring for defects while racking. Stagger boards randomly as possible, avoid creating patterns. See picture for proper layout guidance.



Staggering boards randomly adds strength to the total floor



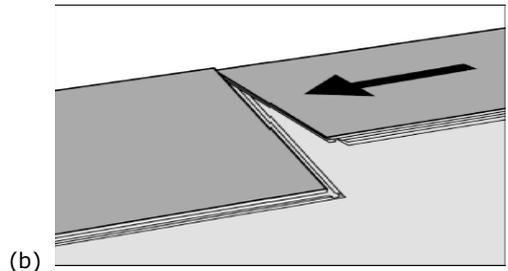
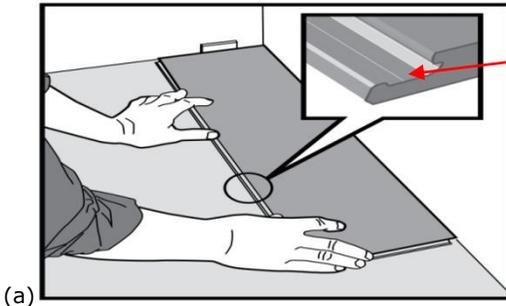
Avoid "stair-step" and "H-Patterns" and spacing board-ends closer than 6"

FLOATING INSTALLATION

Appropriate underlayment (Bellawood, Eco Silent Sound, Dream Home Cork 3mm, 6mm, or similar) Excessive squeaks and gapping can result from an unflat subfloor, using an unapproved or too soft an underlayment. Underlayment cushions are optional for glue down installations.

- 1. Provide perimeter expansion.** The expansion space is the same as the thickness of the new flooring, example: 1/2" thick flooring will require 1/2" expansion. Start by placing spacers against the wall at the short and long side of each plank and at a seam where two planks join. If the starting or ending wall is irregular, scribe or trace the contour of the wall to the starter row of boards.

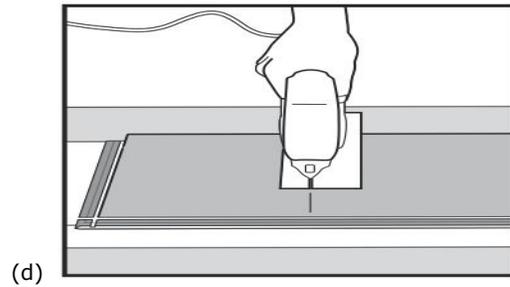
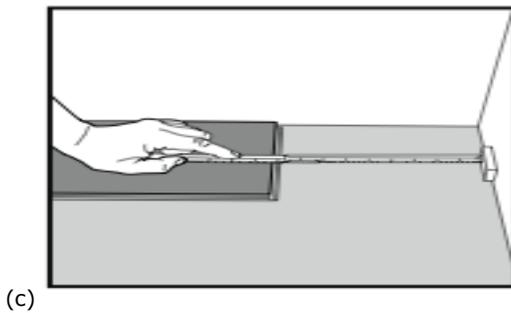
(a), (b) Complete the first row progressively building or locking together the shorter ends of the planks. The short end seams do not fully lock until the next row of flooring is installed.



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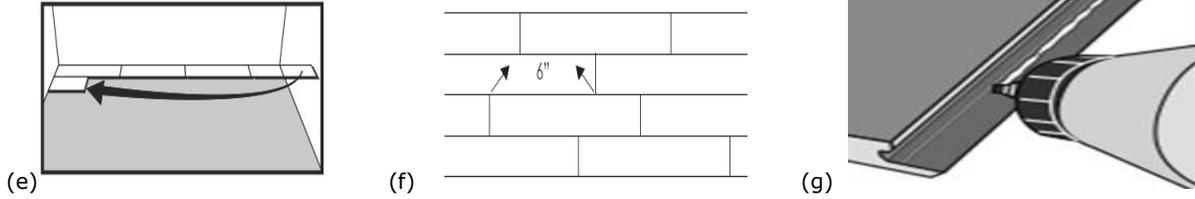
2 (c) The last plank in any row will need to be cut. Measure the distance between the wall and the surface of the last full plank. Make sure to allow for the spacer.

(d) Fill-in planks can be cut with a jig saw, miter saw, or table saw. **TIP:** Clean cuts are achieved using a thin kerf, carbide tipped saw blade. Recommend the use of 60 tooth saw blades. Blade cut rotation should cut into the décor or finished side of the plank.



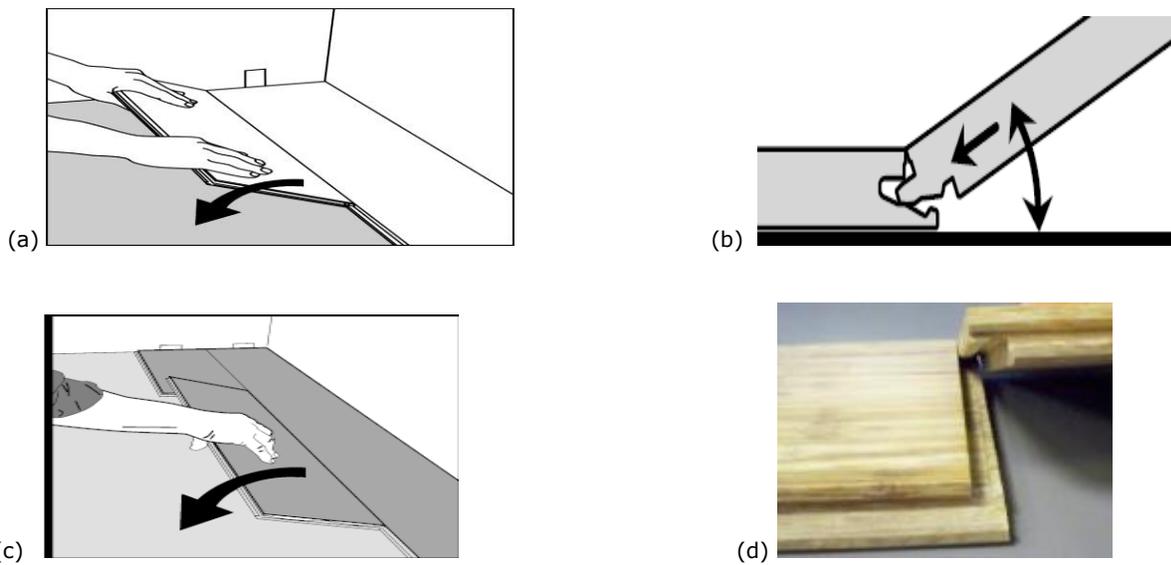
- 3** (e) Ideally, the remaining pieces cut off from planks may serve as the starter or first plank in the next row (10" minimum)
 (f) Stagger flooring a minimum of 6" apart to avoid seam line-up of board end-joints.

(g) Starter or fill-in boards less than 10" in length should be edge-glued with carpenters PVA wood glue. Do not glue each and every plank.



SECOND AND CONSECUTIVE ROWS AND INDIVIDUAL BOARDS

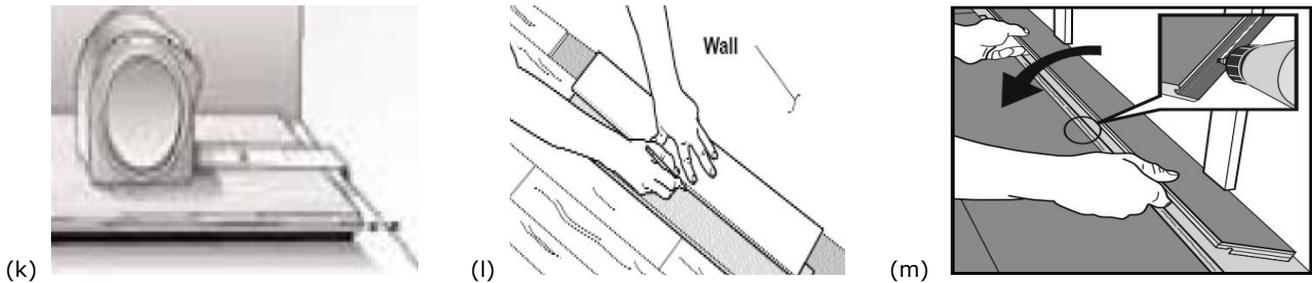
- 1 (a) Position the first plank of the second row with the short end-side against a wall spacer. Next engage the long tongue side into the groove of the first row at approximately a 45° angle until planks fit together.
- (b) Gradually lower the plank down flat until the joint closes. (remove any trash or debris that may interfere with locking planks)
- (c & d) The remaining planks on each row will lock into the long side first and then fold down into the previous plank installed. Continue this until row is complete. Follow steps 4, 5, and 6 on all remaining rows.



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LAST ROWS

- 2 (k) Measure and cut to sufficient width and allow for the recommended expansion gap.
- (l) Scribe or trace contours for the last row
- (m) **Planks less than 3" wide** will need to be glued around all the edges using PVA wood glue.



Expansion breaks

Floating floors requires expansion breaks. Allow normal floor movement independent of other connected rooms. Any room or connected areas greater than **30'** feet in any direction must have expansion breaks placed into the flooring. Expansion breaks and T-Molding transitions must be installed between adjoining rooms, connections in hallways and at all doorways. Failure to meet these requirements can result in the floor buckling, separating or gapping. This requirement is not applicable when gluing this product to the subfloor

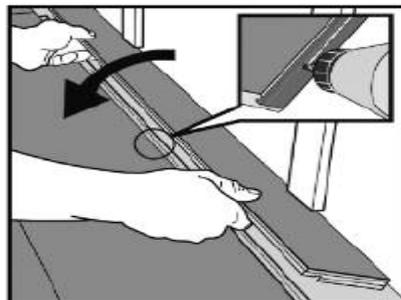
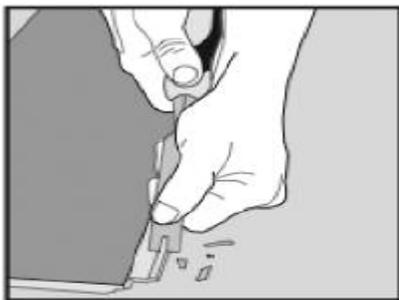


Removing the Lip or locking system, as needed

In areas where it is difficult to angle the planks up into position, such as around/under door moldings or jams, kitchen cabinetry or older type heat registers it may be necessary to remove the lip or locking system from the groove edge of the planks you are fitting to. This is done by lightly scraping or planing off the lip only on the groove side of the plank. This will allow you to install the plank without tilting at a 45. After the lip has been trimmed on the planks you are fitting to, lay the plank flat on the floor. Apply a thin bead of carpenter’s (PVA) wood glue on top of the tongue and the bottom groove of the receiving board, push the planks into position. Immediately wipe off any excess glue with a damp cloth. Blue painters tape can be used to temporarily hold the boards tightly together until the adhesive sets up



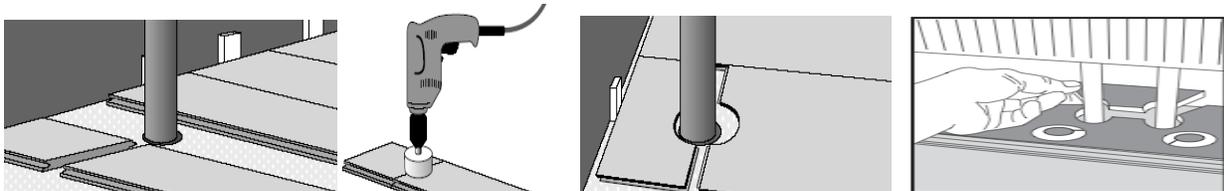
LAST ROW OR UNDER CABINETS



Cut off the locking element with a chisel, put good quality carpenter white glue on the adjusted strip and push the planks horizontally together.

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CUTTING AROUND PIPES



- 1.** Measure the distance from the wall to the center of the pipe. Mark the plank where the hole for the pipe will be drilled. Remember to allow for the spacer. Small parts should be fitted together using wood glue
- 2.** Measure the diameter of the pipe. Drill the hole in the plank 1/2" larger than the diameter of the pipe.
- 3.** If the hole for the pipe is located in the center of the plank, make a cut perpendicular to the long side of the plank. The cut should be made going directly through the hole.
- 4.** If the hole for the pipe is located near the edge of the plank, make two 45° angle cuts to the hole from the side of the plank closest to the hole.
- 5.** You can now position the two pieces around the pipe. Apply a bead of wood glue to the cut edge of the fill piece and press into place. Immediately wipe off any excess glue from the surface with a damp cloth. Use a wedge and hold in place until glue dries.

Minor gaps can be filled with close matching wood filler.

6. The expansion space around the perimeter of the pipe shall be completely filled with a silicone caulking.

STEP APPLICATIONS

Depending on the product purchased, stair nosing may be available to match your flooring:

You can find detailed stair installation instructions on the web site through the Flooring 101 web pages

Stair parts should be nailed and glued for safety. Due to the complexity of stair installation and local building codes, it is highly recommended to consult with a professional installer or our Technical department for stair installation advice.

FINISHING

1. Remove spacers from perimeter of room.

2. Install transition moldings directly to the subflooring (you may need to build-up the leg of the transition using the appropriate thickness shim material when installing thicker bamboo products). Pre-drill and hand nail transition moldings to wood subfloors using 6d finishing nails. Use a wood urethane tube adhesive to bond wood/bamboo transitions to concrete subfloors.

3. Install quarter round or baseboard molding. Moldings must be sufficient size to cover the expansion space. Do not fasten quarter round moldings into the flooring, fasten to the wall/baseboard. It is best to pre-drill and hand nail strand bamboo quarter round moldings using 3d finishing nails, due to its unique hardness. For best appearance fill nail holes with close matching wood filler.

4. When moving furniture protect the flooring by using wood floor approved furniture mover glides.

5. Use coasters or proper felt protectors under the legs of furniture to prevent scratches.

6. Clean this floor using the Bellawood Floor Care kit, or cleaners safe for urethane finishes. Do not flood mop the floor, or use abrasive cleaners. Never use Murphy's oil soap or Orange glow on this flooring.

7. Chipping edges, dents and scratches are site related and not warrantable.

MOLDINGS & TRANSITIONS:

- Install transition moldings directly to the subflooring. Pre-drill and hand nail transition moldings to wood subfloors using 6d finishing nails. Use a wood urethane tube adhesive to bond wood transitions to concrete subfloors.
- Acclimate wood moldings for best results
- Moldings should be predrilled to avoid splitting when hand nailing
- The tool of choice for cutting hardwood moldings is a 10" or 12" motorized miter saw with pre-set adjustments for the basic miter cuts at 22.5°, 45°, and 90°.
- A 60 tooth or 80 tooth carbide tipped blade makes the best cuts. Be sure the saw blade rotation is positioned to cut into the finished face.
- Attach wall base or quarter round moldings to the wall, never into the floor.
- Mitered cuts hide better when joining moldings.

1) **Base Board** – for hiding imperfections and adding a custom finish along any wall.

2) **Quarter-Round** - for covering the expansion left at walls and other fixed surfaces.

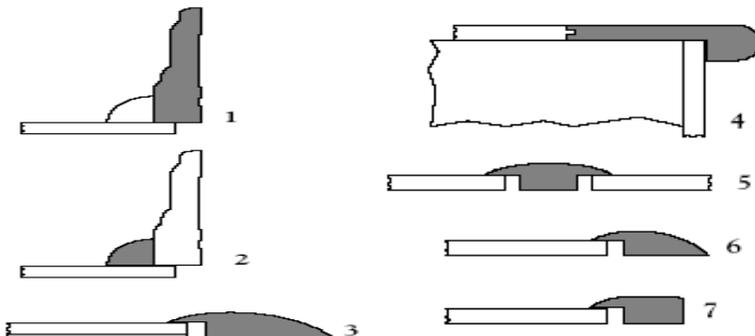
3 & 6) **Reducer Moldings** - used to transition to lower floors.

4) **Stair Nosing** - for finishing the exposed edges of stairs and landings.

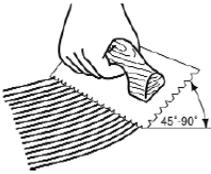
5) **T-Expansion** - for joining two areas of flooring of similar heights.

7) **End Cap** - for finishing the space at sliding glass doors, at bath tubs or transitioning to carpet.

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GLUE DOWN OVERVIEW



Most installation failures result from jobsite moisture (Refer to concrete moisture testing)

Do not unpack or deliver flooring to the jobsite until moisture problems are corrected.

Note that flooring adhesives may have special requirements and limitations of use. Follow closely the adhesive labeling instructions and adhesive Technical Data Sheet pertaining to moisture testing procedures, moisture barriers, and trowel size recommendations. Depending on the selection and application of a particular adhesive, you may be required to use moisture barriers. Adhesive Technical Data Sheets can be found on the adhesive manufacturer's website. When in doubt about an adhesive application or requirement call the adhesive manufacturer. **Not following the adhesive manufacturer's recommendations can lead to installation failure and void your warranty.**

TIPS

- 1 Place saw equipment outside in an area where they can be reached without having to walk across the flooring
- 2 Install the flooring parallel to the longest wall or foundation wall in the room. Keep the flooring straight using a chalk line
- 3 Select flooring from several cartons to mix color, grain and shade.
- 4 Discard twisted or warped boards.
- 5 Do not mix different manufacturing brands of adhesives and sealers.
- 6 Follow the glue manufacturer's labeling instructions regarding adhesive set time, correct trowel size, removal of surface sealers or contaminates and use of moisture barriers
- 7 Glue manufacture may require rolling the floor throughout installation to ensure glue transfer, refer to adhesive labeling instructions
- 8 Use the trowel size recommended by the adhesive company to get required spread rate and ridging height. Typically, trowel size is determined by board type, size and surface texture. Check adhesive bucket for trowel size recommendations.
- 9 During constant use trowel teeth will wear down, for best glue coverage use a new trowel with each new container of adhesive.
- 10 Blue painter tape #2080 can be used to keep rows or sections of floor boards together until the adhesive has cured.
(Incorrect or aggressive tape can harm the finish, do not leave on overnight) Tape 4 or 5 board rows together during installation.
- 11 Many installers choose to use straps or clamps in an effort to force board rows tighter together during installation. Be advised that over-strapping can adversely affect the floor and may result in glue-bond failure, seam peaking, twisted boards or out-of-square floor board alignment
- 12 Underlayment cushions are optional for glue down installations.

SUBFLOOR PREPARATION

Concrete substrates

Because concrete generally takes 15 days to dry for every 1 inch (25 mm) of thickness, the concrete must be between **60 to 90** days old prior to installation and free of surface sealers or contaminates.

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Flat concrete (refer to concrete flatness requirements)

Check Concrete for Sealers

- All paint, adhesives, dust, debris, and sealers must be removed from the concrete prior to gluing down solid bamboo flooring. To check for a sealer on the concrete spill a small cup size amount of water onto the concrete surface. If the water beads up, and does not soak into the concrete, a sealer is present. The sealer will have to be removed before continuing with the glue down installation of bamboo flooring. Check with adhesive manufacture for recommendations on sealer removal.

RECOMMENDED ADHESIVES AND LIMITATIONS

- [Exmore EX3 Pro](#) -----Domestic and Exotic wood adhesive.
- [Exmore EX3 Pro Plus](#) -----2 n- 1 adhesive, sound control, and moisture vapor protection.
Limits: Up to 15lbs of elevated concrete moisture or 95% relative humidity.

- [Exmore EX3 MAX](#)-----2-in-1 adhesive, sound control and moisture vapor protection.
NO Limits: the concrete must be prepared properly and dry to the touch to properly bond.



www.mapei.com

- [Mapei ECO 995](#)----- 2-in-1 urethane adhesive and Moisture Vapor Protection.
Limits: Up to 15lbs of elevated concrete moisture or 85% relative humidity
- [Mapei ECO 980](#) ----- an adhesive only.
- [Morning Star](#) 2-in-1 adhesive and Moisture Vapor Protection
Limits: Up to 15 lbs of elevated concrete moisture or 95% relative humidity

Technical Services 1-800- 992-6273, 1-800-876-2734 (USA) 1-800-361- 9309 (Canada)



www.bostik-us.com

- [Bostiks UltraGrip](#) ----- 2-in-1 urethane adhesive, sound control, and Moisture Vapor Protection
Limits: the concrete must be prepared properly and dry to the touch to properly bond.
- [Bostiks Seal-n-Grip](#) ---2-in-1 urethane adhesive, sound control, and Moisture Vapor Protection
Limits: Up to 15lbs of elevated concrete moisture or 85% relative humidity.
- [Bostiks DuraGrip](#) ----- an adhesive only.
- [Bostiks BBA](#) ----- an adhesive only.
- [Bostiks MVP](#) ----- Moisture Vapor Protection/Sound control.
No Limits: the concrete must be prepared properly and dry to the touch to properly bond.

Technical Services 1-800-523-6530 1-800-726-7845 1-888-592-8558



Cured adhesive may cloud, chemically damage or etch the floor's finish.

Clean wet adhesive from the surface of the floor frequently using the manufacturers recommended remover. Use clean towels, changing frequently to prevent haze and adhesive residue. Contact the adhesive manufacturer for dried adhesive removal remedies

Acceptable wood substrates for Glue-Down applications

Do not glue directly over unsuitable substrates such as but not limited to; Ceramic, Porcelain, gypcrete or gypsum base products particleboard, Luan, Masonite, adhesive residue, pressure treated plywood, Strand/Wafer Board, pressboard, chipboard/flake board, solid-board subflooring, strip hardwood flooring, fiber board, cement board or chemically treated wood. These types of substrates are approved for floating installations only and must be covered with a minimum of 3/8" CDX plywood underlayment when gluing this product to the subfloor.

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GLUE DOWN INSTRUCTIONS

Install in good lighting. Inspect the flooring often. Make adjustments as needed. If satisfied, continue with the installation. 100sqft of installed flooring is enough to verify quality or 20sqft for areas under 100sqft.

Step 1

- 1** Determine the starting wall, usually the longest wall. At the two opposite ends of this wall, measure out the width of 5 planks, add the expansion space to that measurement, and place a mark on the subfloor. (do not include the tongue and groove when measuring the width of the planks.)
- 2** Next, use a chalk line to connect the two marks. Tack down furring wood strips along the straight chalk line. You can also use carpet tack strips. This will give you support to push your first row of flooring against. Use concrete nails when attaching the furring strips to concrete subfloors.
- 3** Measure out from your first chalk line the width of 5 planks on each side, and pop another chalk line. This chalk line will run parallel to the first chalk line.
- 4** Rack out 5 rows of flooring starting at the second chalk line. Be sure to pull from several flooring boxes at a time to mix color, while keeping proper seam stagger.
- 5** Using an approved trowel and wood flooring adhesive, spread the glue between the furring wood strips and second chalk line.
- 6** Start placing the racked out flooring into the adhesive. If you're facing the starting wall, install the flooring left to right. The groove side of the planks should be facing away from the starting wall. Push the first row up tight against the furring wood strips.
- 7** Progressively lay-in the next rows by inserting the tongue into the groove of the previous row at a 30 degree angle, then drop board into adhesive. Avoid dragging or sliding boards together as this can trap or squeeze glue up in between the boards creating gaps. Continue working 5 rows together. The last board in each row will need to be cut to fit.

8 The balance of a board cut may be used to start a new row, discard lengths under 6". Avoid clustering of end joints. Stagger the ends of the boards correctly. A tapping block can be used to gently tap the boards into proper position. During installation, end gaps between board ends can be minimized by temporarily locking a completed row in place by using spacers placed between the first and the last board of each row, remove when glue has dried.

9 Apply #2080 blue painters tape to the plank surface perpendicular to the installed floor. This is used to hold the planks together.

10 Continue adding new chalk lines using the previous techniques. Spread adhesive and continue installing 5 rows at a time until job is complete. Tape planks together as needed to keep them from separating.

11 Remove any wet adhesive that gets on the floor finish right away using mineral spirits or adhesive manufactures adhesive remover product.

INSTALLING THE LAST ROWS

Step 2:

1 Most often, the entire length of the last row will need to be trimmed so that it is narrow enough to fit the remaining space. It should be glued and wedged with wood shims into place. Leave all spacers/shims in the expansion space until the adhesive has cured, then remove. Keep the floor free from foot traffic, until adhesive has cured.

2 Go back to the starting wall and pull up the furring wood strip or carpet tack strip. Spread adhesive onto the subfloor, and install the last boards needed to finish the job. Install these boards right to left. Use wood shims between the wall and floor to keep the last few boards tight together. Blue painters tape #2080 can also be used.

3 Do not to spread adhesive too far ahead of your work area. If the adhesive skins over and fails to transfer, remove and spread new adhesive to achieve proper bonding to the subfloor.

4 Occasionally lift a board and check for adhesive transfer. Adequate adhesive transfer is necessary to ensure sufficient holding strength. Solid Bamboo flooring planks must have 95% adhesive transfer to the back of the flooring planks.

5 When not in use, keep the adhesive container tightly closed to prevent drying and difficulty in spreading the adhesive. Proper ventilation within the room should be provided. Follow the recommendations on the adhesive container.

Post-installation

- After installation, allow glue to fully cure for 24 hrs. before replacing furniture and foot traffic.
- For best matching of sheen or milling save a box of flooring for future repairs.

DOUBLE STICK INSTALLATIONS– Flooring glued over an approved underlayment that is also glued to the subfloor

Approved underlayment's - Bellawood Premium, Bellawood Platinum, Eco Silent Sound, Insulayment and Cork

Allow the underlayment to fully cure before gluing bamboo flooring to the underlayment

REPAIRS

Minor white scratches can be repaired with a wood stain marker. Nicks and dents can be filled with a wood blend sticks or color wood epoxy. Major damage may require individual board replacements up to 10% of the total floor and is best accomplished by professional flooring installers.

ROUTINE MAINTENANCE

- 1.** Use a damp cloth to blot up spills as soon as they happen. Never allow liquids to stand on your floor.
- 2.** For tough spots, such as oil, paint, markers, lipstick, ink, or tar apply mineral spirits on a clean white cloth, and then wipe the area with a damp cloth to remove any remaining residue.
- 3. Sweep**, dust, or vacuum the floor regularly with a recommended hard floor attachment (not a beater bar) to prevent accumulation of dirt and grit that can scratch or dull the floor finish.
- 4.** Do not use flood or **wet mop** the floor with soap, water, oil-soap detergent, or any other liquid household cleaning material. This could cause swelling, warping, delamination, joint-line separation and void the warranty.
- 5.** Do not use steel wool, **abrasive cleaners** or strong ammoniated or chlorinated type cleaners.
- 6.** Do not use buffing or polishing machines, these can generate heat or hot spots.

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7. For spots such as candle wax or chewing gum, harden the spot with ice and then gently scrape with a plastic scraper, such as a credit card. Be careful not to scratch the flooring surface. Wipe clean with a damp cloth.

8. A more frequent dust-mopping or vacuuming schedule may be required in very sandy areas such as a beach home.

9. Clean flooring with the [Bellawood Floor Care Kit](#) or cleaning products safe for urethane finishes

Protection

- 1.** Entry mats made of natural fibers are recommended and will help collect the dirt, sand, grit, and other substances such as oil, asphalt, or driveway sealer that might otherwise be tracked onto your floor.
- 2.** Do not use plastic foam backed mats as they may contain solvents harming the flooring finish. To prevent slippage, use an under [rug underlayment](#) approved for urethane finishes.
- 3.** Use floor protectors and wide-load bearing leg bases/ rollers to minimize indentations and scratches from heavy objects. As a rule, the heavier the object, the wider the floor protector.
- 4.** Maintain a normal indoor relative humidity level between 30%-50% throughout the year to minimize the natural expansion and contraction of the wood.
- 5.** Avoid excessive exposure to water during periods of inclement weather.
- 6.** Do not walk on your floor with stiletto heels, shoes with sports cleats or exposed metal parts.
- 7.** Do not allow sharp, pointed, or rough textured objects to be exposed to the hardwood flooring.

8. Keep **pet nails** trimmed to prevent scratching the floor.
9. **UV sunlight** will enhance –lighten or darken- the tone of different species of hardwood to varying degrees. Periodically rearranging your area rugs and furniture will allow the floor to antique or age evenly.
10. Use a dolly when moving heavy furniture or appliances; use a piece of quarter inch plywood or Masonite to protect the floor. Never try to slide or roll heavy objects across the floor.
11. A protective [felt](#), pads or castors should be used for furniture, [rubber wheels](#) or protective mats for office chairs.
12. We do not endorse the use of **hot steam** cleaning machines on hard wood products, use at your own risk.
13. Toys and tools can **scratch and dent** the finishes, are site related and not warrantable.
14. If using the glue-down installation method, do not allow foot traffic or heavy furniture on floor for 24 hours.

RADIANT HEAT SYSTEMS. General Precautions and Recommendations

This flooring can be successfully applied over radiant heating systems, surface temperatures should be maintained and never exceed **85°F, (30°C)**. Because of the wide array of systems on the market ([Hydronic](#), [embedded in concrete](#), [electrical wire/coil](#), [heating film/mat](#)) each with its own features and applications it is recommended that the user consult with the heating provider for best practices and installation methods. It's the user's responsibility to confirm the suitability of any selected or existing radiant-heating system that will be used in conjunction with this flooring.

Rugs placed over radiant heated flooring can increase the surface temperature in that area by 3°- 5°F degrees. Please refer to <http://www.radiantpanelassociation.org/> for more information on radiant heat systems.

Humidification

Radiant heat contributes to the drying out of wood flooring. For optimal floor protection the indoor humidity must be maintained between 30-50% year round. Proper humidity levels are maintained by use of a humidifier. To protect your investment and to assure that your floors provide lasting satisfaction a whole house humidification system may be required. Failure to do so can result in edge cupping, squeaking, delamination, splintering, cracking or other issues. Slight surface splits particularly at the ends of planks should be expected with installations over radiant heat and does not constitute a product failure.

When using adhesives over radiant heating systems

As a rule, make sure (RH) is turned off for 3-days before and after installation for proper "cure"

Exceeding 100° surface temperature will result in bonding problems.

Confirm with the adhesive manufacturer/literature the application and surface temperature limitations of your selected adhesive.

All **Bostik** hardwood adhesives, including urethane and polymer adhesives are acceptable over (RH)

Mapei 995/Exmore Pro Plus and 980/Exmore Basic are acceptable over (RH). Use 995 for moisture protection over hydronic (RH) Modified Silanes (e.g. 985/Morning Star) not recommended



CAUTION: WOOD DUST Cut flooring outside

Sawing, sanding and machining wood products can produce dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

Precautionary Measures: Cut flooring outside. Equip power tools with a dust collector. If high dust levels are encountered; use an appropriate NIOSH-designated dust mask. Avoid dust contact with eye and skin, **USE EYE AND EAR PROTECTION.**

First Aid Measures in case of irritation: flush/rinse eyes or skin with water for at least 15 minutes.

TO OBTAIN ASSISTANCE WITH PRODUCT INFORMATION, PLEASE CONTACT THE STORE OF ORIGINAL PURCHASE OR CONTACT **CUSTOMER CARE AT 800-366-4204**. VISIT THE "FLOORING 101" or www.lumberliquidators.com FOR INSTALLATION TIPS AND ADDITIONAL WARRANTY INFORMATION.

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