Barcelona Engineered Hardwood Flooring Installation Instructions

INSTALLATION WARNING

Installation conditions – including temperature, sun exposure and humidity – will affect this product's performance over time. For best results, room temperature and humidity of installation area must be kept consistent with normal, year-round living conditions for a minimum of one week prior to installation. All products require a specific temperature range of 60°F to 80°F with 35% to 55% relative humidity. Installation outside of these recommended ranges or over a wet subfloor will likely cause movement in the flooring, including potential shrinkage, tip-raising, gapping between pieces, cupping and face-checking. **Barcelona Engineered Hardwood Flooring MUST be installed according to the National Wood Flooring Association's (NWFA) installation guidelines in order for the Limited Warranties to be valid.** The most current publication of the NWFA guidelines is available to all NWFA members, and can be found at www.nwfa.org (800-422-4556)

INSTALLER'S / OWNERS RESPONSIBILITY

As a natural product, hardwood contains inherent variations in color, grain and appearance and other visual imperfections. Barcelona Engineered Hardwood Flooring is manufactured in accordance with industry standards which permit a defect tolerance not to exceed 5%. These defects may be the result of manufacturing or naturally occurring characteristics of the material. It is recommended that a 5% cutting or grading allowance be added to the total sq footage when calculating the quantity of the flooring required. It is the sole and joint responsibility of the installer and owner to conduct a quality inspection of all the flooring prior to installation. All pieces of flooring should be examined for quality of manufacture, finish and color. If the product quality is deemed unacceptable, it should not be installed. Flooring that has been installed will be deemed to have been inspected and accepted by the installer and owner. It is the sole responsibility of the flooring installer to ensure that the job site, subfloor and installation tools and materials meet or exceed industry standards. Barcelona Hardwood voids all responsibility for problems arising from incorrect or improper site preparations or installations procedures.
IMPORTANT! Adhesive/masking tape applied directly to hardwood floor surface will damage the factory finish and void the manufacturer warranties.

SITE PREPARATION

- The building is completely enclosed with all outside doors and windows in place and secured.
- All concrete, masonry, plastering, drywall, texturing, painting and other wet work is complete and has been allowed to cure and dry completely.
- Basements and crawlspaces are dry. Crawlspaces must have no standing water and have a vapor barrier installed in accordance with local building codes.
- Exterior surface drainage is directing water away from the house.
- Interior heat and humidity levels can be controlled and maintained at recommended levels for the duration of the acclimatization and installation period.
- Sub-floor is properly prepared for installation.

FLOORING ACCLIMATIZATION AND CLIMATE CONTROL

- Climate control at the job site must be maintained with the temperature between 60-80°F and humidity at 35-55% before and during the installation. These conditions should be maintained for at least one week prior to installation.
- Flooring material should not be delivered to job site until the site has been acclimatized as detailed above.
- After delivery, the flooring must be allowed to acclimatize on the job site for 72 hrs prior to installation.
- Do not open packages during the acclimatization period, leave boxes sealed until ready to start installation, and then only as needed.

SUBFLOOR PREPARATION

Wood Sub-floors

- Sub-floor must be structurally sound and properly secured with nails or screws every 6 inches along joists to reduce the possibility of squeaking.
- Wood sub-floors must be dry and free of wax, paint, oil, and debris. Replace any water-damaged or delaminated sub-flooring or underlayment.
- Additional requirements for flatness are required for floating floors as stated in installation guidelines.
- Preferred sub-flooring-3/4" CDX Grade Plywood or ¾" OSB PS2 Rated sub-floor/underlayment, sealed side down, with joist spacing of 19.2" or less. Minimum sub-floors-5/8" CDX Grade Plywood sub- floor/underlayment with joist spacing of no more than 16". If joist spacing is greater than 19.2" on center, add a second layer of subflooring material to bring the overall thickness to 1-1/8" for optimum floor performance. Hardwood flooring should be installed perpendicular to flooring joist. If flooring is installed parallel with joist then an additional layer of ½" plywood must be installed to meet minimum requirements of 1-1/8".
  Sub –floor moisture check. Measure the moisture content of both the sub-floor and the hardwood flooring with a pin moisture meter. Sub-floor must not exceed 12% moisture content. The moisture difference between sub-floor and hardwood flooring shall not exceed 4%. If sub-floors exceed this amount, an effort should be made to locate and eliminate the source of moisture before further installation.
- Do not nail or staple over particle board or similar product.

Concrete Sub-floors

- Concrete slabs must be of high compressive strength with minimum 3,000 psi. In addition, concrete sub-floors must be dry, smooth and free of wax, paint, oil grease, dirt, non-compatible sealers and drywall compound etc.
- Engineered hardwood flooring may be installed on, above, and/or below-grade.
- Concrete substrates must meet or exceed adhesive manufactures guidelines for flatness.
- Additional requirements for flatness are required for floating floors as stated in installation guideline.
- Lightweight concrete that has a dry density of 100 pounds or less per cubic foot is not suitable for engineered wood floors. To check for lightweight concrete, draw a nail cross the top. If it leave an indentation, it is probably lightweight concrete.
- Concrete sub-floors should always be checked for moisture content prior to the installation of wood flooring. Standard moisture tests for concrete sub-floors include relative humidity testing, calcium chloride test and calcium carbide test.
- Measure the moisture content of the concrete slab using a TRAMEX concrete moisture meter. If it reads 4.5% or above, then this slab must be checked using calcium chloride tests. Flooring should not be laid if the test result exceeds 3 lbs per 1000 sq ft of vapor emission in a 24-hour period. Please follow the ASTM guideline for concrete moisture testing.

Other Sub-floors

- Ceramic, terrazzo, resilient tile and sheet vinyl, and other hard surfaces are suitable as a sub-floor for engineered hardwood flooring installation.
- The above tile and vinyl products should be level and permanently bonded to the sub-floor by appropriate methods. Clean and abrade surfaces to remove any sealers or surface treatments to insure a good adhesive bond. Do not install over more than one layer that exceeds 1/8” in thickness over suitable sub-floor.
- Substrate must meet or exceed adhesive manufacturers guidelines for flatness.
- Additional requirements for flatness are required for floating floors as stated in installation guidelines.

EXPANSION SPACE

Hardwood flooring will expand and contract with changes in ambient temperature and humidity. To allow for this, during installation leave a ½” expansion space around the entire perimeter of the floor between the flooring and the walls. Also leave a ½” expansion space where the flooring will meet any vertical obstacle, such as stairs, pipes, door sills, tiles, cabinets, etc.

Note: In climates with extreme variations in humidity, it may be necessary to leave a larger expansion space.

NAIL DOWN INSTALLATION GUIDELINES:

Nail + Glue Assist

NOTE: Nail + Glue Assist installation is recommended when using nailing down/staple installation method.

There are two recommended methods for glue assist.

Method one: Glue applied to subfloor This option can be used on most products and is the most efficient to employ. Select the area of substrate on which you'll be installing. As with any glue application, select an area that can be worked comfortably within the adhesive's open time. Apply beads of adhesive directly to the subfloor perpendicular to the direction of the flooring boards. Place beads maximum of 12" apart. Place boards onto glued area as normal and set fasteners. Clean up any excess glue immediately according to glue manufacturer's instructions.

Method two: Glue applied directly to floorboards. This glue assist option is recommended for products with long fixed length boards. Apply adhesive to the underside of each board. Apply an 1/4" bead parallel to each end, approximately 1" from the end. Apply in an 1/4" bead a serpentine pattern down the length approximately in the center of the board, keeping the glue 1" in from the edges of the board. Carefully set the board in place (to avoid getting glue on other surfaces) then nail in as normal. Clean up any excess glue immediately according to glue manufacturer's instructions. Glue end joints certain wide plank products also requiring gluing of the end joints for added stability.

- Make sure to properly test subfloor before installation, following subfloor preparation instructions previously discussed.
- Create a working line parallel to the starting wall, in multiples of our engineered plank width, to set up the baseline of installation.
- Trowel spread the adhesive on the subfloor along the chalk line wide enough to allow the first row of flooring to be installed, being careful not to cover the line. Follow the adhesive manufacturer's recommendations for wet lay times before proceeding to the next step.
- Starter Rows requires that installation be done by leading with the tongue. When starting at the wall, trim groove off the back of the boards being used for the starting row. Face nail the back edge of the board with 18- gauge nails. Then blind nail into the pocket above the tongue with one of approved nail/staple systems.
- Trowel spread enough adhesive to install 2-3 more rows.
- Install the second row by sliding the groove side on to the tongue of the first row. Blind/edge nail into place, with fasteners every 4" to 6" and 2" to 3" from each end joint. Stagger end joints at least 8". Continue nailing and gluing 2-3 rows at a time in this manner across the room. Avoid creating "H" patterns (where an end joint is adjacent to another end joint in the second to last row installed). Use cut ends to start subsequent row, discarding any pieces shorter than 8".
- Use adjustable pneumatic power hammer or nailing machine with 1 1⁄2" – 2" nails as is required and make sure nailing foot is appropriate to the nails/staples used. To avoid damage to the tongue be sure to adjust for proper pressure on the compressor.
- Add each additional row of flooring, watching the pattern repeat and offsetting or staggering the joints as desired. Generally, joints should either match in a specific pattern or be staggered by no less than six inches. Finished areas should be covered with a breathable protective paper, NEVER PLASTIC, immediately after installation to prevent damage. Do not tape protective paper to the finished surface of the wood for an extended period of time.
- Install molding and trim. Always fasten moldings to the wall, not the flooring.
- Most adhesives require the installer clean adhesive off the flooring boards during installation. Follow adhesive manufacturer's recommendations for this procedure.
- Do not allow foot traffic on finished floor for 24 hours after installation is completed.

Disclaimer

Bravada Harwood Flooring products are not warranted against squeaking, popping or crackling when using nail down/staple installation methods. Squeaking, popping or crackling is normal, and these symptoms may be aggravated in arid areas or during dry conditions.

GLUE-DOWN INSTALLATION GUIDELINES:

- Make sure to properly test subfloor before installation, following subfloor preparation instructions previously discussed.
- Apply a moisture barrier to slab. **Sika or TEC** is recommended.
- A urethane-based adhesive should be used exclusively. **Sika or TEC** is recommended.
- Read the glue manufacturer's instructions (printed in detail on the glue container) to choose the correct size trowel.
- Create a working line parallel to the starting wall, in multiples of our engineered plank width, to set up the baseline of installation.
- Following the spread rate and curing time suggested by the glue manufacturer, spread glue evenly on the subfloor to cover an area appropriate to the number of planks that can be laid in time for best result of the glue.
- Lay one row of flooring planks along the entire length of the work line. Add each additional row of flooring, watching the pattern repeat and offsetting or staggering the joints as desired. (Generally, joints should either match in a specific pattern or be staggered by no less than six inches).
- A 1⁄2" expansion space should be left around the perimeter. Roll whole floor with a 150 lb. roller within 3-6 hours after installation. Finished areas should be covered with a breathable protective paper, NEVER PLASTIC, immediately after installation to prevent damage. Do not tape protective paper to the finished surface of the wood for extended periods of time.

GENERAL RADIANT HEAT INSTALLATION INSTRUCTION GUIDELINES:

- To minimize the effect that rapid changes in temperature will have on the moisture content of the wood floor. NWFA recommends that an outside thermostat be installed. If one is not present, suggest to your customer that this should be considered. Unlike conventional heating systems, which switch on as needed. Radiant systems work most effectively and with less trauma to the wood floor if the heating process is gradual, based on small incremental increases in relation to the outside temperature.
- Subfloors should have proper moisture tests according to the moisture testing procedures outlined in Chapter 3. Of the National Wood Flooring Association Installation instructions.
- The essential requirement in proper applications of wood flooring over radiant heated systems is to avoid penetration of the heating element. Radiant-heated subfloor systems can be concrete, wood or a combination of both. The type of subfloor as described in the previous chapters determines subfloor preparation.
- If the subfloor is concrete and it has cured. Turn the heat on. Regardless of season, and leave it on for at least 5-6 days to drive out residual moisture before installation of the wood flooring.
- Some installation systems, particularly glue-down applications, require the heat to be reduced of even turned off before installation of the flooring begins, so the adhesive does not cure excessively.

- With water-heated radiant-heat systems, a pressure test must be performed and documented by a qualified plumber or the system installer prior to beginning the installation of the wood flooring.
- If flooring materials that conduct heat at different rates are on the same circuit or heating zone, check with the HVAC mechanical engineer before proceeding.
- Radiant heat is dry heat. A humidification system may be necessary to maintain wood flooring in its comfort zone.
- It is the responsibility of the Owner/Installer to determine the correct installation method over Radiant Heat. Please refer to National Wood Flooring Installation Guidelines-Appendix H for additional information.

FLOATING INSTALLATION GUIDELINES:

- Sub-floor flatness is critical to the success of a floating floor installation. A flatness tolerance of 1/8” in a 10-foot radius is required for floating floor installation.
- Install a leading brand pad-2 in 1 or 3 in 1. Follow pad manufacturer's instructions. If it is a concrete sub-floor, It is required to install a 6 mil polyethylene film.
- Use adhesive such as Titebond Tongue and Groove adhesive or similar product as recommended by your retailers/distributors.
- Snap a working line parallel to the starting wall, allowing expansion space as specified above.
- Boards should be installed left to right with the tongue facing away from the wall. Install first three rows by applying a thin bead of glue in the groove on the side and end of each board. Press each board firmly together and lightly use a tapping block if necessary.
- Continue installation as above by applying a thin bead of glue in groove side and end groove of every board throughout installation.
- Clean excess glue from between boards with a clean cotton cloth. Tape each board together at side and end seams using 3-M blue Tape. Allow glue to set before continuing installation of subsequent rows.
- Continue the installation until finished. Distribute lengths, staggering end joints as recommended above.
- Thoroughly clean, sweep, and vacuum installed floor and inspect the floor for scratches, gaps and other imperfections. Do not apply any tape directly to the installed flooring to hold down floor protection. The new floor can be used after 12-24 hours.