

ENGINEERED HARDWOOD GENERAL INSTALLATION INSTRUCTIONS FOR TONGUE AND GROOVE FLOORING

APPLICATIONS Staple/Glue/Float

Beaulieu®'s engineered flooring can be installed on every level of the home. When nailing, engineered flooring is typically installed using specially designed pneumatic wood flooring staplers or cleat nailers, both types work well. Ensure the use of correct sized fasteners and adaptors. It can be fully glued to wood subfloors and concrete. Follow the glue manufacturer's labeling instructions regarding correct trowel size, removal of surface sealers or contaminants and use of moisture barriers. It can also be edge glued and floated over an approved underlayment to meet the needs of the customer.

Install Beaulieu's hardwood flooring according to the general installation guidelines as set forth by the (NWFA) National Wood Flooring Association at www.nwfa.org. However, the Beaulieu instructions take precedence. Beaulieu denies any responsibility for problems beyond its control such as, but not limited to, job-site and subfloor conditions, improper storage, environmental or moisture-related issues, installation and tool usage. Comply with local or International Residential Codes (IRC). Please read these instructions before starting the installation.

NOTE: Beaulieu's engineered hardwood products can be installed using the floating method, full spread glue down method as well as the staple/nail down method. A detailed version of each of the mentioned installation methods can be found on our website at beaulieuflooring.com, or you may contact: Technical Services at 800-944-2840 or tek.services@beaulieugroup.com

ACCLIMATION

Acclimation is a required procedure prior to installation of engineered hardwood. Store the UNOPENED BOXES in the room where the floor is to be installed for at least 48 hours prior to installation. Always store the boxes on a flat and level surface; never store the boxes on their sides. Heating and air conditioning should be operational and set between 65 °F – 80°F (18.3 °C – 26.7 °C) and relative humidity in the room should be 40% – 60%.

TOOLS AND MATERIALS REQUIRED

- Safety glasses and dust mask
- Table type power saw with dust collector, circular saw with 40 to 60 teeth carbide-tipped blade (thin kerf) or a power jigsaw or handsaw
- Handsaw or door jamb saw for door jambs
- 5/16" (8 mm) spacing wedges
- Pull bar, hammer and tapping block
- Recommended adhesive
- Glue scraper or clean damp cloth
- Non-marring blue painters tape
- Underlayment material with a maximum thickness of 1/8" (3.2 mm) with a minimum 25 lb. density.
- For installations over concrete or cement-type substrates, a vapor barrier or a vapor barrier underlayment is required (see 'Concrete subfloor' below)
- Recommended adhesives, staples, nails
- Embossing leveler/floor patch (if necessary)
- **NOTE TO INSTALLERS: When using knee pads, insure that the cap is a soft material. Never use hard cap knee pads as these may scratch the flooring.**

THE SUPPORTING FLOOR

Beaulieu engineered hardwood flooring can be installed on most existing floors, wooden, PVC, and concrete floors. All carpeting and padding should be removed. Make sure that the surface is clean, dry, and flat within 3/16" per 10 foot radius (4.7 mm per 3 m) for floating and staple/nail down with gradual change. Glue down maximum deviation is 1/8" (3.2 mm) over a 10 foot (3 m) radius. Supporting floors must be rigid as too much deflection can result in a failed installation. Do not install over plank floors. If plank floors are present a minimum ¼" (6.35 mm) solid underlayment must be used.

WOODEN SUBSTRATES

Wooden and wood-based materials (plywood, OSB, particle board) must be dry, with a moisture reading between 6% –12% (this should be checked with a moisture meter). Wooden subfloors must not have moisture reading greater than 12%. All wooden subfloors must be 3/4" (19 mm). Ensure that the boards of the subfloor are properly fastened to the supporting beams and that you do not have any squeaking or depressed areas. Patch if needed and fill depressed areas with floor leveling compound. Raised areas must be sanded down. The subfloor must be level and flat within 3/16" per 10 foot radius (4.7 mm per 3 m). Traditional floor joist systems cannot be spaced more than 16" (40.6 cm) apart; engineered floors truss systems must meet all manufacturer and building code requirements.

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 should be no less than 18" (45.7 cm) and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation; local regulations prevail where necessary.

CONCRETE SUBSTRATES (floating only)

- All types of concrete floors, light weight concrete floors or ceramics, require a moisture inhibiting membrane (vapor barrier). Use a polyethylene film of 6-8 mils (0.15 – 0.2 mm). This vapor barrier must be applied with a minimum of 8" (20 cm) overlap and taped with a waterproof tape and turned about 2" (5 cm) up the wall. You will also need a separate underlayment material with a maximum thickness of 1/8" (3.2 mm) with a minimum 25 lb. A moisture barrier underlayment that meets the MVER requirements can be used in place of the two separate items mentioned above.

A vapor barrier can be incorporated into the separate underlayment; however, it must be sufficient enough to qualify as a moisture barrier. Check with the underlayment manufacturer's specs. Concrete subfloors must be at least one month old prior to installation, and should be tested for excessive moisture.

- Maximum levels for floating:
Calcium chloride test of 3 lb/1000 sq. ft. (1.36 kg/92.9 sq. m)/24 hours. ASTM F1869-11
Relative Humidity test of no more than 75% ASTM F2170-11
- Maximum levels for glue with Beaulieu adhesive:
Calcium chloride test of 8 lb/1000 sq. ft. (3.63 kg/92.9 sq. m)/24 hours. ASTM F1869-11
Relative Humidity test of no more than 85% ASTM F2170-11

SUBFLOORS MUST BE CHECKED PRIOR TO INSTALLATION

GENERAL INFORMATION

For Beaulieu engineered hardwood flooring to be installed as a floating floor, you must leave an expansion gap around the perimeter of the room of 5/16" (8 mm) to prevent binding of the flooring. This applies to any obstructions (columns, pipes) in the installation as well. Door jambs should be undercut to allow adequate clearance space to slide the product underneath the trim and jam. A 5/16" (8 mm) expansion is also necessary to leave the expansion gap at the wall underneath the door jam. Installations greater than 33' (10 m) in either direction or those with separate rooms will require the use of transition moldings to provide proper expansion space. Remove base moldings. If necessary, the boards in the first row can be cut to a narrower width to ensure the boards of the final row are at least 2" (5 cm) wide.

Before installation, clean, sweep or vacuum the subfloor so it is free of dirt and debris. Check the moisture in the subfloor using a moisture meter or another approved method. The subfloor must be flat. For floating and nail down installations, deviations in the subfloor should be level and flat within 3/16" per 10 foot radius (4.7 mm per 3 m) by either filling or sanding. For glue down installations, the subfloor should be leveled to 1/8" (3.2 mm) over a 10 foot (3 m) radius.

Porous subfloors should be primed with an approved flooring grade primer when using the glue down method.

RADIANT- HEATED FLOORS

Radiant heat systems must be operating for a minimum of three (3) weeks prior to the installation of Beaulieu engineered hardwood floor. The system should be turned off at the time of the installation, or, if in winter, should be set at exactly 65 °F (18.3°C) for a minimum of 48 hours prior to installation. After the installation is complete, or when turning on the radiant heat system from a cold start, the operating temperature may be increased by a maximum of 5 °F (2.8 °C) in a 24-hour period. The maximum allowable surface temperature for engineered hardwood floors is 80°F (26.7°C). Radiant heating system must be embedded into the substrate. Do not use Beaulieu engineered hardwood flooring with systems that expose the floor to wide variations in temperature, such as hotwire induction mat systems. The installation area of the engineered hardwood flooring should not contain heated and non-heated areas, unless expansion joints separate them. A vapor barrier is required for all radiant heat installations. Keep in mind that loose rugs or carpets may accidentally function as heat insulators and raise the temperature to more than the tolerated maximum surface temperature of 80 °F (26.7°C).

LAYOUT AND MEASURING

First, determine which way to run the planks. Rules of thumb are:

- Lengthwise in the longest direction of the room.
- Flooring looks better if it runs in the same direction as the main light source.

To avoid straddling a door jamb with a plank, use a T-molding or measure back to the starting wall to ensure a plank connection within the door jamb area. It is recommended that you do not end up with a narrow strip at the end that is less than 2" (5 cm) wide on any wall in the room. It is recommended to cut the first and last rows so they are equal in width. Undercut all door jambs so that the flooring will easily slide underneath them. Using a scrap piece of flooring and underlayment as guide, undercut the jambs with a jamb saw or regular handsaw. Always leave an expansion space between the flooring and all walls or other fixed objects.

VISUAL INSPECTION AND MIXING PLANKS

Notice to installer

Planks showing visible defects should never be installed. These planks should be put aside and used for cuts or submitted for a product claim. Claims resulting from the installation of such planks will not be honored. For best results it is recommended that material be mixed from three or four boxes when installing Beaulieu engineered hardwood flooring. Do not put like planks next to each other and randomly stagger end joints for best visual appeal.

Cutting the planks

When cutting engineered hardwood flooring with a circular saw, it is recommended to cut with the decorative side down. When using a table saw, jig saw or handsaw, cut with the decorative side up. Remember that airborne wood dust can be an explosive hazard and an irritant to eyes, skin and the respiratory system. Use dust collectors on power tools, wear appropriate clothing, eye protection and an approved dust mask.

Always start a row with a plank at least 12" (30 cm) long and insure the minimum end joint offset is 12" (30 cm) apart.

FLOATING INSTRUCTIONS

1. Getting started

Check the planks before you start to make sure that they are not in any way damaged or have quality defects. After cleaning the subfloor, you may roll out the first sheet of vapor barrier or underlayment material.

2. First two (2) rows

Dry-lay the first two (2) rows prior to gluing. Start installation of the planks in the right hand corner, groove side against the wall. Make sure to place your spacing wedges along the walls as you go. If the wall is uneven, the planks must be adapted to its contours. To do this, remove the first row. Cut the planks as required and then re-lay them.

3. Applying the glue

Cut applicator tip at 45° angle with a utility knife. Apply glue to the bottom of the groove along the entire length and on the end of each plank, but never completely fill the groove.

4. Start gluing

Installation and gluing sequence is critical and provides stability to the first two (2) rows. Misaligned starter rows can ruin the entire installation. Start by gluing the first plank in the second row to the starter row. Use a tapping block and a hammer to push glued planks together until no gaps are visible. Immediately wipe away any excess glue with a clean damp cloth.

5. Continue gluing the first two (2) rows

Glue the next plank in the first row to the one previously glued to first plank of the second row by applying glue only on the end of the plank. Tap the planks together with a tapping block and hammer. Always remove squeezed up glue immediately with a glue scraper or a clean damp cloth. Then glue the second plank of the second row into the one you just glued in the first row and apply glue to both the length and the width edges. Keep alternating between the first and second row until you reach the left hand side of the room. When gluing the last plank, use a pry bar to pull the ends of the planks tightly together.

6. Continue laying the floor

After several rows are installed, use strips of non-marring, releasable blue painters tape to hold the planks securely. Remember to remove tape as you go as you must not allow the tape to remain on the planks for more than two (2) hours. Once the first sheet of underlayment is covered, install the second sheet. Remember to put the spacing wedges as you go.

7. Laying the last row

To lay the last row, measure and cut the planks. Do not forget to leave the 5/16" (8 mm) space along the wall and use a pry bar to pull the planks tightly together. Allow a minimum of twelve (12) hours before removing all spacing wedges and allowing foot traffic.

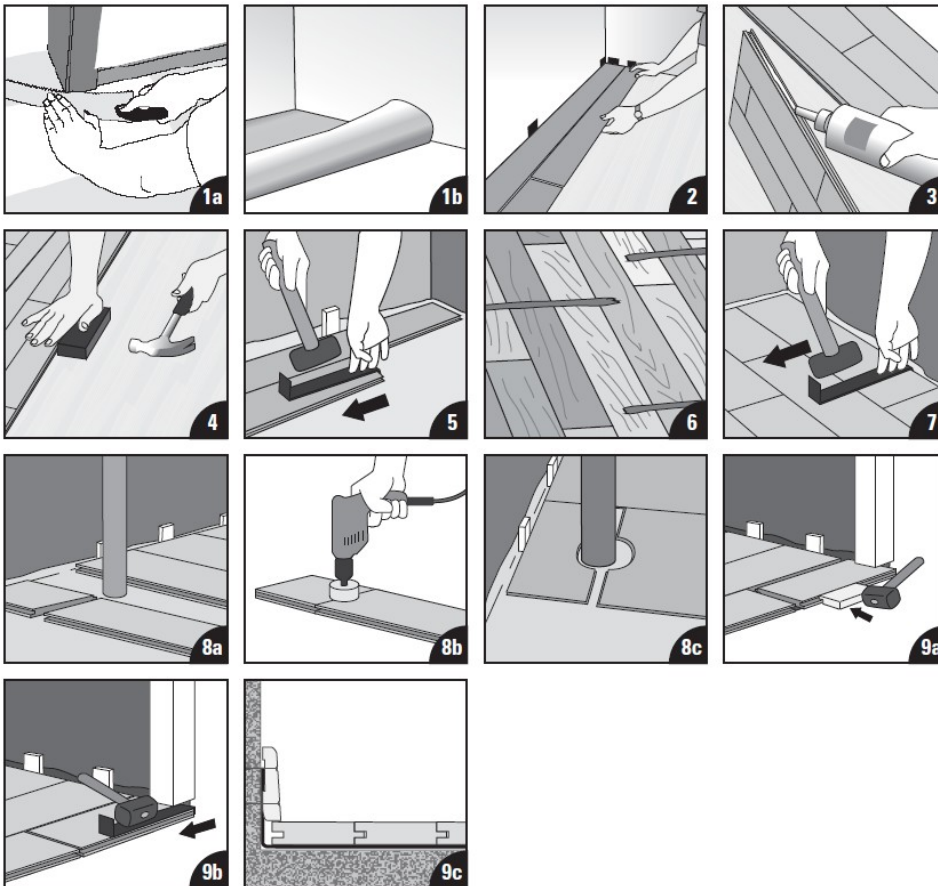
8. Holes for pipes

Measure the diameter of the pipe and drill a hole that is 5/16" (8 mm) larger. Saw off a piece and lay the plank in place on the floor. Then glue the sawed off piece in place.

9. Door molding and skirting

Lay a board and underlayment (with the decorative side down) next to the door molding, cut the door trim and jamb ensuring that the planks will slide easily under the trim. Then slide the plank under the molding and glue to previous row. Install the moldings over the underlayment, and vapor barrier if applicable, that runs up the wall from under the floor. Never attach the molding to the floor. This method allows the floor to expand and contract under the molding.

INSTALLATION ILLUSTRATIONS



Homeowner Obligations

To maintain the coverage under the terms of these warranties and ensure fast and easy warranty service, the homeowner is responsible for the following:

- Keep five (5) planks of the engineered flooring product after installation for testing purposes.
- Keep and be able to provide the original sales receipt or documentation illustrating proof of purchase and installation date of the product.
- Make sure the flooring is installed according to Beaulieu Installation Instructions.
- Keep a list of products used to clean your flooring.

Please visit our website at beaulieuflooring.com for the most up-to-date version of this document as it may have been revised and updated since this printed version.

Warranty Guide as well as Care and Maintenance instructions can also be found on our website at beaulieuflooring.com, or you may contact:
Technical Services at 800-944-2840 or tek.services@beaulieugroup.com

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