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# Unfinished Hardwood Flooring Installation Guide

We at Bridgewell Resources appreciate your business and to help ensure you enjoy our flooring products for years to come please read this installation guide for your unfinished flooring.

## **Step 1 – Prepare the Boards with Vapor-Barrier Paper**

- Find your room's square footage by multiplying the width by the length, but also allow for an extra 10 to 15 percent for mistakes and uneven boards.
- Leave the boards in the room for 48 hours to adjust to the room's humidity and temperature to avoid warping and gapping.
- Then staple vapor-barrier paper to the sub-floor leaving at least a 4-inch overlap of the vapor-barrier.
- Lay the boards perpendicular to the floor joists to create a solid anchor.
- Face-nail the first row to the floor joists.

## **Step 2 – Allowing for Expansion**

- It's important to allow for expansion. Leave a 3/8-inch gap along the walls and secure the boards with a pneumatic nail gun.

## **Step 3 – Avoid Awkward Alignment**

- Put nails into the tongue every 10-12 inches.
- Then tap the groove to ensure a snug fit.
- To avoid awkward aligning at the end joints, stagger boards at least 6 inches.



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### ***Installer Responsibilities***

- The installer assumes full responsibility for the final inspection of product quality before installing it.
- In addition, the installer must also determine that the environment and condition of the job site and subfloor meet all requirements of the following Hardwood Flooring Installation Guide.
- Bridgewell Resources will not be held responsible for job complications resulting from or involving improper or inappropriate subfloor, job site or environment preparations, conditions or deficiencies.
- Stain, filler or putty used for the correction of defects during installation should be considered standard procedure.
- A 5-10 percent waste factor must be ordered in addition to actual square footage need. Please note that the waste factor may be greater for diagonal installations.
- The following installation guide adheres to the recommendations of the National Wood Flooring Association.

### **Job Site Inspection & Acclimation**

- Bridgewell Hardwood Flooring should be one of the last elements installed in new construction. Cement, paint, plumbing, heating and cooling systems should all be installed prior to wood flooring and in finished and good working order first.
- Proper and constant temperatures should be at 68-74°F.
- All concrete slabs must have at least 3/4" plywood and 6 mil polyfilm vapor-barrier attached. Each slab must be tested for moisture content as well. It should be no more than 3 lbs./100 sq. ft emissions, prior to installing hardwood flooring.
- Preliminary moisture testing can be done in the following ways:
  1. Use an approved moisture meter such as: Delmhorst Moisture Meter Model J-200 or Tramex Concrete Encounter and follow the manufacturers' instructions for use.
  2. Use polyfilm, such as a clear garbage bag or plastic drop cloth, cut into 2' x 2' squares. Tape it down in several places on the concrete subfloor. Wait for 24-48 hours and check for condensation under the polyfilm, or for dark moisture spots on the concrete. Either occurrence may be a sign of excess moisture, and further testing is mandatory.
- A Calcium Chloride test and a PH alkalinity test will determine the true moisture emissions and alkalinity of the concrete floor. Follow all manufacturers' instructions.
  1. For the Calcium Chloride test – the maximum acceptable reading is 3 lbs./24hrs/100s q. ft for moisture emissions.
  2. For the PH alkalinity test – on a pH number scale of 1-14, a reading between 6-9 is acceptable.
  3. If either test yields unacceptable results the concrete slab must be sealed with appropriate sealers, following the manufacturer's instructions.



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## Subfloor Installation

- Installation on plywood and wood substrates: DO NOT install over particleboard.
  1. Subfloor should be 3/4" or thicker plywood to be installed over 16" on center joists.
  2. Lay plywood so grained outer plies are at right angles to joists; adjacent rows should be staggered four feet and nailed with 7D or larger nails, every 6" along each joist.
  3. Re-nail old floor where squeaks occur and sand down any high spots and install the new planks perpendicular to the old boards, or overlay with 1/4" plywood underlayment.
  4. Leave a 1/8" gap at edges and nail every 6" at edges, and every 12" in both directions and through the interior of each plywood sheet with 7D or larger nails.
  5. The plywood or wood substrates should have a moisture content within 2 percent of that of the acclimated wood flooring.
- Installation on concrete slabs
  1. Concrete slabs must have at least 3/4" of plywood and 6 mil polyfilm vapor-barrier attached, per the NWFA guidelines for nail-down subfloors on concrete.
  2. Use mechanical fasteners including; powder-driven pins, pneumatic driven nails, screws, deformed pins, or other concrete-suitable application.
  3. Allow at least 3/4" for expansion around all vertical obstructions.
  4. Allow 1/8" space around staggered panels.
  5. Fasten starting in the center and moving out, to prevent bowing.
  6. Then fasten 2" from the edge at 6"-8" intervals along the perimeter of the sheet and then at least one fastener spaced every 12" across the interior of the panel.

## Center Line Layout Method

- Using the trammel point method find the middle of the room and snap a line down the center in the longest direction.
- Using wood screws, install a starter board along the line.
- Now nail a first row of flooring along the starter board, ensuring that the starter board does not move during the process. The groove edge should be lined up against the starter board.
- Then drill and nail the first three rows through the tongue. Top nails should not be used.
- A blind nailer should be used to install the remaining rows of flooring.
- Once the first direction is complete, remove the starter board and repeat in the other direction. Note that this will require the use of a spline or slip tongue to join the groove edges and reverse direction.