



# INSTALLATION INSTRUCTIONS

## for Engineered Hardwood

### Section 1: INSTALLER / OWNER RESPONSIBILITIES

Hardwood flooring is a product of nature and its inherent beauty stems from the fact that each piece is unique with no two pieces the same. Due to the fact that this flooring is a product of nature, the installer and/or owner, have the following responsibilities:

- 1.1 How was the floor chosen? Review the control samples, (the samples from which the floor was chosen), and compare to the actual flooring batch onsite prior to installation to make sure it meets the owner's expectations as to:
  1. Grade – is it the correct grade? Also grade from batch to batch may vary slightly so make sure the owner is happy with this batch of flooring you are about to install.
  2. Color/Graining - do certain dark/light pieces or wild grained need to be graded out to meet the owners expectations?
  3. Color Variation, Batch-to-Batch – inspect the production run of flooring you received and make sure it meets your expectations. Wood from different locales can have varying colors and grains and differ from the samples from which the floor was chosen. Tint colors may also vary slightly batch to batch. Make sure the owner will be happy with the batch they received.
  4. Color Change - do they understand how the wood will change color over time?  
The owner may have chosen their floor from samples that have aged so they need to understand in advance of installation the color change to be expected in this wood.
  5. Finish issues:
    - A. Is the gloss correct?
    - B. Does the look of the finish meet the owners expectations?
    - C. Does the owner understand that the finish will scratch and wear and that care must be taken during installation, move-in and in-use?
- 1.2 Installer responsibilities during installation:
  - A. Receive the floor & make sure it is as ordered and meets the owner's expectations.
  - B. Test the subfloor and relative humidity on site to make sure the flooring will perform satisfactorily on this installation.
  - C. Follow these Installation Instructions.
  - D. Grade out any pieces with visible defects and stop the installation should a reoccurring problem be found, (over the 5% allowed by industry practices). DO NOT INSTALL pieces with visible defects.
- 1.3 Keep a Permanent Job Record
- 1.4 Make sure the owner understands that wood and water, (as well as wood and overly dry conditions), do not mix as wood flooring is a natural material and will shrink/cup/move when over-dried and will expand, delaminate, warp and buckle/cup when over-wetted.
- 1.5 Make sure the owner understands how to maintain the floor. Give them a copy of Canoe Bay Maintenance Instructions and Warranty Information.

## Section 2: PRE-INSTALLATION JOBSITE REQUIREMENTS

**WARNING:** Our flooring is well manufactured and is designed to perform within the typical residential environment. We are not responsible for site conditions, as we do not control them. Only you, the installer can test and correct for too dry or too wet site conditions prior to installation. Note: Wood flooring installed in areas where the relative humidity is below 35% may cup, shrink in width/length, or crack and in these dry conditions a humidifier is necessary to bring relative humidity above 35%. Flooring installed on top of wet sub floors may crown, (and then cup), swell, (and then shrink), buckle, telegraph, or edge/tip raise. Flooring that is soaked from above will do the same. **DO NOT INSTALL THIS FLOORING ON WET SUBFLOORS OR IN OVERLY DRY CONDITIONS** without first correcting any deficient conditions.

- 2.1 Carefully examine the flooring prior to installation for grade, color, finish and quality. Ensure adequate lighting for proper inspection. If flooring is not acceptable, contact your distributor immediately and arrange for replacement. Canoe Bay Floors cannot accept responsibility for flooring installed with visible defects. Prior to installation of any flooring, the installer must ensure that the jobsite and subfloor meet the requirements of these instructions. Canoe Bay Floors is not responsible for flooring failure resulting from unsatisfactory jobsite and/or subfloor conditions.
- 2.2 Hardwood flooring should be one of the last items installed for any new construction or remodel project. All work involving water or moisture should be completed before flooring installation. Warning – water and wood do not mix. Installing flooring onto a wet subfloor will likely cause cupping, tip & edge raising, telegraphing of core and subsequent gapping.
- 2.3 Room temperature and humidity of installation area should be consistent with normal, year-round living conditions for at least a week before installation of wood flooring. Room temperature of 65-75°F and a humidity range of 35-65% is recommended. Warning - humidity levels below 35% will likely cause movement in the flooring, including gapping between pieces and possible cupping and checking in the face.
- 2.4 Canoe Bay Floors cannot be held responsible for site conditions. Flooring formats, such as Canoe Bay's plywood based engineered wood flooring, are particularly susceptible to showing movement such as edge/end shrinking and face checking from low relative humidity below 35% on site and/or tip raising and subsequent end shrinking if installed over a wet subfloor.
- 2.5 Engineered wood floors DO NOT need any moisture equalization prior to installation and should be installed from just opened boxes. DO NOT OPEN more than a few boxes in advance of installation and only the number of boxes which will be installed within the next few hours.

## Section 3: PRE-INSTALLATION SUBFLOOR REQUIREMENTS

- 3.1 All Subfloor must be:
  - Structurally sound
  - Clean: Thoroughly swept and free of all debris (If being glued down, subfloor must be free from wax, grease, paint, sealers, & old adhesives etc., which can be removed by sanding)
  - Level: Flat to 3/16" per 10-foot radius
  - Dry and will remain dry: Subfloor must remain dry year-round. Moisture content of wood sub floors must not exceed 11%, concrete must not exceed 3.5 as measured with a concrete moisture meter.
- 3.2 Wood Sub Floors must be dry and well secured. Nail or screw every 6" along joists to avoid squeaking. If not level, sand down high spots and fill low spots with an underlayment patch. Must accept and hold both cleats or staples using a nail-down installation method.
- 3.3 Concrete Sub Floors must be fully cured, at least 60 days old, and should have minimum 6-mil polyfilm between concrete and ground. Subfloor should be flat and level within 3/16" on 10'. If necessary grind high spots down and level low spots with a leveling compound.
- 3.4 Do not install on concrete unless YOU ARE SURE it stays dry year-round. All concrete should be

tested for moisture and be below 3.5 moisture content as measured by a concrete moisture meter. Other concrete testing methods may be used.

- 3.5 It is highly recommended, that if gluing down on concrete, (even if you believe it is dry), which is on or below grade, to install sheet vinyl first and then glue the wood flooring on top of the vinyl, as this provides an effective permanent moisture barrier. Another alternative to sheet vinyl is to use a moisture barrier systems, as they provide warranties to you.
- 3.6 Remember, a concrete slab on /below grade that measures dry today may become moist in the future due to rising groundwater. Installing a moisture barrier now may be viewed as an insurance policy against concrete becoming wet in the future. This will lead to subsequent floor failure. Canoe Bay is not responsible for site related moisture issues.
- 3.7 Ceramic tile, resilient tile and sheet vinyl covered subfloors must be well-bonded to subfloor, in good condition, clean and level. Do not sand existing vinyl floors, as they may contain asbestos.
- 3.8 Radiant heat: PLEASE SEE CANOE BAY'S RADIANT-HEAT GUIDELINES

## Section 4: INSTALLATION TOOLS

### 4.1 FOR ALL INSTALLATION METHODS:

- Tape measure
- Tapping block
- Pencil
- Pry Bar
- Chalk line
- 3/8 inch spacers
- Crosscut power saw
- Hammer
- Painters Tape

### 4.2 FOR GLUE-DOWN INSTALLATION (RECOMMENDED):

- Urethane flooring adhesive
  - Note: **DO NOT USE** water based mastics. They will cause the floor to fail.
- On concrete slabs, which are on/below grade, we strongly recommend installing a moisture barrier systems.
- Trowel per flooring adhesive manufacturer's recommendations.

### 4.3 FOR NAIL-DOWN INSTALLATION:

- Industrial flooring dtppler or flooring nailers – air stapler/nailer with 9/16” naildown adapter with 18 gauge, 1/4” x 1-1/2” staples or 18/20 gauge 1-1/2” L-shaped cleats.

### 4.4 FOR FLOATING INSTALLATION:

- 6-mil polyfilm
- Foam underlayment
- Tongue & Groove Glue
- Duct tape

### 4.5 ACCEPTABLE SUBFLOOR TYPES:

- Plywood (at least 3/4” thick)
- Underlayment grade particleboard -floating/glue-down only)
- OSB PS2 rated (at least 3/4” thick) Note: some OSB type products will not hold the nail in place which can result in squeaky floors. This is a subfloor issue.
- Concrete slab (floating/glue-down only)
- Existing wood floor
- Ceramic tile (floating/glue-down only)
- Resilient tile & sheet vinyl (floating/glue-down only)

## Section 5: GLUE-DOWN INSTALLATION (RECOMMENDED)

- 5.1 Make sure subfloor is tested for moisture content first and is properly prepared.
- 5.2 On concrete subfloors, which are on or below grade (ground level), always assume the worst and even if they measure dry, we recommend taking the following installation steps to ensure a trouble-free installation. The cost of the precaution is little when compared to costs to rip out and replace a floor which has failed due to high moisture from the subfloor.
- 5.3 Method #1:  
Moisture Barrier Systems on which they provide a warranty that moisture will not pass through and damage your wood flooring.
- 5.4 Method #2:  
We recommend installing a sheet vinyl floor first and then gluing down our wood floor over the sheet vinyl. Follow the vinyl manufacturers' recommendations.
- 5.5 Use only polymer based wood flooring adhesive designed specifically for wood floors. **DO NOT** use water based adhesives! Follow adhesive instructions for proper trowel size and adhesive set time before beginning installation of flooring.
- 5.6 Once the spread adhesive has setup sufficiently per adhesive manufacturers instructions, lay the first row of flooring with groove facing the wall, and continue laying flooring. Always check your working lines to be sure the floor is still aligned. Use tapping block to fit planks together, but be careful not to let installed floor move on the wet adhesive while you are working.
- 5.7 When first section is finished, continue to spread adhesive and lay flooring section by section until installation is complete. Use a damp cloth to immediately remove any adhesive that gets on flooring surface. Warning – **DO NOT** allow adhesives to dry on the finished flooring as it is very difficult to remove it once dried without damaging the flooring. Remember to stagger end joints from row to row.
- 5.8 Always leave at least a 3/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space.
- 5.9 Walk each section of flooring in order to make sure it is well bonded to the subfloor within the adhesive working time. Flooring planks on the perimeter of the room may require weight on them until adhesive cures enough to hold them down. Make sure the floor is clean from debris to avoid unwanted denting.

## Section 6: STAPLE/NAIL INSTALLATION

- 6.1 Make sure subfloor is tested for moisture content first and is properly prepared.
- 6.2 Use an Industrial Flooring Stapler – air stapler/nailer with 9/16" naildown adapter or a stapler/nailer of your choice after testing to make sure that stapling/nailing will not cause dimpling in the finished floor. Make sure the nail or staple is not breaking the tongue. An 18 or 20 gauge is recommended.
- 6.3 For the first and second starting rows: lay first plank inside chalk line with grooved edge toward wall. Install entire first row in the same manner. Always leave at least a 3/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space. In order to affix these first rows, use screws to set a strong and straight starting row rather than face nailing. Begin the subsequent rows, and once you have installed enough flooring whereby the nailer will not move the starter row off alignment, unscrew the starter row, throw away the damaged pieces and glue down replacement boards with a urethane adhesive. Set weight on top of these rows and allow them to set.
- 6.4 Subsequent rows: Lay by using floor nailer/stapler to blind-nail top inside edge of tongue at a 45 degree angle. Nail each board every 4-6" and within 2" of each end. Remember to stagger end joints from row to row and use a tapping block to fit boards together. It may be necessary to face-nail in doorways or tight areas where the nailer/stapler can't fit, (or glue down in these areas and weight them while the adhesive sets). The last two rows will need to be face-nailed, (or glued down), in the same manner as the first two rows.

- 6.5 **WARNING** – Stapling/nailing can cause dimpling on the face if stapled incorrectly. Always make sure to visually check the installed floor as you go to ensure that the stapling/nailing is not causing dimpling on the face. (Note: be sure to look at the face of the installed flooring at a low angle from a distance to see if dimpling is occurring as it is hard to see when directly above the floor.) If dimpling does occur, STOP and adjust the stapler/nailer shoe and angle/place of staple entry in order to avoid it. Canoe Bay is not responsible for dimpling.

## **Section 7: FLOATING INSTALLATION**

- 7.1 Make sure subfloor is tested for moisture content first and is properly prepared.
- 7.2 Laying an underlayment of polyfilm: If below or on grade, first lay a 6-mil polyfilm with seams overlapped 8 inches. Fasten seams every 18-24" with duct tape. Run the outside edges of film up perimeter of each wall 4 inches. Trim after flooring installation is complete.
- 7.3 Laying foam: Lay foam underlayment by butting edges, not overlapping. Tape full length of the seam. Installing the floor: Start first row with groove toward wall. Glue end joints of first row by applying a small but continuous bead of tongue and groove adhesive to the bottom side of the side groove. Always leave at least a 3/8" expansion space between flooring and all walls and vertical objects such as pipes and cabinets. Use wood or plastic spacers during installation to maintain this expansion space. Lay subsequent rows of flooring by applying glue to side and end joints and fitting planks together with a tapping block. Remember to stagger end joints from row to row at least 8 inches apart.
- 7.4 Clean up any adhesive that is on the face of the floor by using a damp rag – DO NOT allow adhesive to dry on the flooring face as it is difficult to then remove without damaging the flooring face.

## **Section 8: AFTER INSTALLATION**

- 8.1 If you decide to cover the floor, (to allow the other construction trades to continue working), in order to protect the floors prior to final cleanup and turnover to the owner, use rosin paper to cover the floors and only use painters tape to hold the rosin paper to the floor. Do NOT USE plastic film or other non-breathing type coverings as this can cause the floor to become damaged from humidity buildups. Also, only use painters tape as this tape is designed for use on finishes and other tapes may pull and damage the finish when removing it.
- 8.2 Remove expansion spacers and reinstall base and/or quarter round moldings to cover the expansion space.
- 8.3 It is suggested that you buff the floor with lambs wool pads in order to "pull any splinters", remove any residues and handprints/foot prints, etc.
- 8.4 Install any transition pieces that may be needed (reducer, T-moldings, nosing, etc.).
- 8.5 Do not allow foot traffic or heavy furniture on floor for 24 hours (if glue-down or floating).
- 8.6 Dust mop or vacuum your floor to remove any dirt or debris.

## **Section 9: CLEANING & MAINTENANCE**

- 9.1 All Canoe Bay hardwood floors have the latest and toughest factory-applied UV-cured urethane finishes with aluminum oxide. Bottom line – no wood floor is easier to clean and maintain. But there's still a little work involved. Even though our floors are as tough as they come, did we mention they aren't bulletproof?
- 9.2 Sweep or vacuum when needed. This will get the scratchy dirt and grit that makes it inside. When deeper cleaning is required, we recommend the Bona line of products.
- 9.3 Visit [www.canoebayfloors.com](http://www.canoebayfloors.com) to obtain the complete cleaning and maintenance instructions.