



donegal installation instructions

installer/owner responsibility

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:

- Understanding how the floor will look once installed – the installer and owner must meet prior to installation to review:
 - 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 making sure it meets the owner's expectations as to:
 - **Grade** – is it the correct grade? 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.
 - **Color/Graining** – do certain dark/light pieces or wild grained need to be graded out to meet the owners' expectations?
 - **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.
 - **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.
 - **Finish issues:**
 - Is the gloss correct?
 - Does the look of the finish meet the owner's expectations?
 - Does the owner understand that the finish will scratch and wear and that care must be taken during installation, move-in, and in-use?

Congratulations! You have now made sure that the owner will not be disappointed once the flooring is installed, and they see it for the first time!! ecofinishes cannot be responsible for visual issues once the flooring is installed.

- Installer responsibilities during installation:
 - Receive the floor & make sure it is as ordered and meets the owner's expectations.
 - Test the subfloor and relative humidity on site to make sure the flooring will perform satisfactorily on this installation.
 - Follow these Installation Instructions.
 - 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.
- Keep a permanent job record
- 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 and move when over-dried. They will also expand, delaminate, warp and buckle/cup when over-wetted.
- Make sure the owner understands how to maintain the floor. Give them a copy of ecofinishes' Maintenance Instructions & Warranty.

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.

pre-installation jobsite requirements

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. ecofinishes 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. ecofinishes is not responsible for flooring failure resulting from unsatisfactory jobsite and/or subfloor conditions.

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.

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.





ecofinishes cannot be held responsible for site conditions. Flooring formats, such as ecofinishes' 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.

Store the wood flooring, in the UNOPENED boxes, at installation area for 24 -72 hours before installation to allow flooring to adjust to room temperature. Do not store the boxes of flooring directly on concrete. **DO NOT OPEN THE BOXES PRIOR TO INSTALLATION!**

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.

pre-installation subfloor requirements

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 3lbs with a calcium Chloride test, or not exceed 75% relative humidity.

Wood subfloors 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. Patch must accept and hold both cleats or staples using a nail-down installation method.

Concrete subfloors must be fully cured, at least 60 days old, and should have minimum 6-mil poly film 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 floor leveling compound specified for use under hardwood floors manufacturer of leveling compound instructions must be followed).

Do not install on concrete unless YOU ARE SURE it stays dry year-round. All concrete should be tested for moisture and be below 3lbs (Calcium Chloride) and below 75% relative humidity. Other concrete testing methods may be used; see NWFA Installation Guidelines Section II.

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 an epoxy moisture vapor barrier first and then glue the wood flooring on top of the barrier, as this provides an effective permanent moisture barrier. Another alternative to a moisture vapor barrier is to use an all-in-one type adhesive that will provide moisture vapor barrier with an approved adhesive, and they provide warranties to you.












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. **ecofinishes is not responsible for site related moisture issues. ecofinishes is not responsible for the bond between flooring and subfloor. Installer must test and follow installation instructions for all products used to provide the best chance of a successful installation. Adhesive or bond failure is not a product failure.**

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.




Radiant heat: Only use floating or glue-down installation over radiant heat. Subfloor should never exceed 80°F. Check with radiant heat manufacturer's suggested guidelines to limit the maximum water temperature inside heating pipes. Switch off heating unit two days before flooring installation and bring heat up slowly after installation. Do not exceed 4° per day in temperature adjustment.

installation tools






For all installation methods:

-  Tape measure
-  Tapping block
-  Pencil
-  Pry bar
-  Chalk line
-  Wood or plastic spacers (3/8")
-  Crosscut power saw
-  Table saw
-  Jig or coping saw
-  Hammer (rubber mallet)
-  Blue or Frog Tape – Sensitive (for use on painted or finished wood products)



For the recommended glue-down installation method, you will also need:

-  Hardwood flooring adhesive approved for the thickness and width of the product.
-  The appropriate trowel specified by the adhesive manufacturer for the use with the dimensions of the flooring and particular use and specifications of the adhesive.
-  On concrete slabs, which are on/below grade, we recommend installing a 2-part epoxy moisture barrier and then installing the wood floor on that system.







For nail-down installation, you will also need:

-  Industrial flooring stapler or nailer with 1/2" adapter shoe to assure the proper position for the nail/staple
-  1/4" x 1-1/2" to 1-3/4" staples for the floor runner stapler (18 gauge)
-  1-1/2" – 1-3/4" L-shaped cleats (18 gauge)
-  Caulking gun or Sausage gun and adhesive or full spread adhesive approved for a minimum of 3/8" engineered hardwood installation.
-  Air compressor with hoses or battery powered flooring stapler/nailer described above.

For floating installation, you'll also need:

-  Hardwood pad underlayment with a perm rating of 1 or less.
-  Tongue and groove adhesive specifically designated for a floating installation of engineered hardwood.

Acceptable Subfloor types: see NWFA Installation guidelines section II for specific specifications.

-  Plywood – Exposure 1 rated
-  OSB Gold (Exposure 1 rated) – Note: some OSB type products will not properly hold the staple/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)

NOTE: PARTICLE BOARD IS NOT AN APPROVED SUBFLOOR FOR HARDWOOD INSTALLATION.

installer/owner responsibility

Make sure subfloor is tested for moisture first and is properly prepared.

Since wood expands with any increase in moisture content, always leave at least a 1/2" expansion space between flooring and all walls and any other permanent vertical objects, such as pipes and cabinets. This space will be covered up once you reapply base moldings around the room. Use wood or plastic spacers during installation to maintain this 1/2" expansion space.

When laying flooring, stagger end joints from row to row by at least 8". When cutting the last plank in a row to fit, you can use the cut-off end to begin the next row. If cut-off end is 8" in length or less, discard it and instead cut a new plank at a random length and use it to start the next row. Always begin each row from the same side of the room.

Work from several open boxes of flooring and "dry lay" the floor before permanently laying the floor (but never open more than a few boxes in advance). This will allow you to select the varying grains & colors and to arrange them in a harmonious pattern. It also allows you the opportunity to select out very dark/light pieces for use in hidden areas in order to create a more uniform floor. Remember, it is the installers' responsibility to set the expectations of what the finished floor will look like with the end user first and then to pull out pieces that do not meet those expectations.

To draw planks together, always use a tapping block and hammer or rubber mallet, as tapping the flooring itself will result in edge damage. When near a wall, you can use a pull up or tapping bar to pry close the side and end joints. Take care not to damage edge of flooring. For glue down & floating applications, use sensitive blue or frog tape to hold any pieces, which might have side bow and the need to hold them straight & tight until the adhesive sets up.

Begin installation next to an outside wall. This is usually the straightest and best reference for establishing a straight working line. Establish this line by measuring an equal distance from the wall at both ends and snapping a chalk line. The distance you measure from the wall should be the width of a plank plus about 3/8" for expansion space. You may need to scribe cut the first row of planks to match the wall in order to make a straight working line if the wall is out of straight. If the room is wider than 20 feet, a straight line should be used in the center of the room and work towards each outer wall. You may use a spline or slip tongue to join the two groove sides together at the center of the room.

glue-down installation – RECOMMENDED

Make sure subfloor is tested for moisture content first and is properly prepared.

On concrete subfloors, which are on or below grade (ground level), always assume the worst and even if they measure dry, we now 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.

Method #1: We recommend installing a 2-part epoxy moisture vapor barrier (MVB) first and then gluing down our wood floor over that system. Follow the MVB manufacturers' recommendations.

Method #2: Use an all-in-one or moisture vapor protection adhesive specifically designed and approved for the flooring product and flooring system you are installing. Read adhesive manufacturer's limitations and warranty before installation to determine if this adhesive will suit the particular installation.

It is always recommended to use the adhesive primer recommended by the manufacturer of the adhesive you are using prior to installation. Most MVB and adhesives are designed to be used as a system. It is NOT recommended to cross manufacturers or go outside of a particular system. Use only Urethane or Silane flooring adhesives that specify the dimensions and type of hardwood flooring you are installing. Follow adhesive instructions for proper trowel size and adhesive set time before beginning installation of flooring.

Once the spread adhesive has set up sufficiently per adhesive manufacturer's 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. It may be beneficial on the first few rows to use a fast set adhesive or let the adhesive set up to allow further installation to push against a solid starting row(s). This may save from the floor moving after installation prior to the adhesive setting up.

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. For info on an adhesive remover contact the adhesive manufacturer. Remember to stagger end joints from row to row.

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.

staple/nail-down installation

All 5" wide plank engineered hardwood floors are required to be installed with either a full spread adhesive, rated for the proper width of the material being installed, or if nailing or stapling, a glue assisted installation.

Full Spread Installation:

You must account for moisture in any installation. Consult the manufacturer or the NWFA for concrete installations. For installations over a sub floor, prime the floor with an approved adhesive primer with moisture vapor retarder. This will increase adhesion and provide the proper moisture transfer from the subfloor.

Use an approved hardwood flooring adhesive for the width to be installed with the proper trowel for the material to be installed. Follow adhesive manufacturers' installation procedures.

Glue Assisted Installation:

You must account for moisture in any installation. Two ways to provide a moisture vapor retarder is to install an underlayment paper. Cut a 1/2" channel in the paper perpendicular to the direction of the floor to be laid every 12" on center. A second option is to roll on a coat of adhesive primer with moisture vapor retarding capabilities over the entire subfloor to create a moisture retarder.

During installation of the wood you can then run a minimum 1/4" bead of approved HWF adhesive every 12" on center perpendicular to the direction of the wood. Use a normal nailing pattern for the dimensions of the wood installed per NWFA installation procedures. You will also need to add a horizontal bead at each end joint (or perpendicular to the end joint – horizontal to the flooring).

Make sure subfloor is tested for moisture content first and is properly prepared. Use Industrial Flooring Stapler – air or battery powered stapler/nailer with 1/2" nail down adapter after testing to make sure that stapling/nailing will not cause dimpling in the finished floor.

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 1/2" 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 an adhesive (noted above). Set weight on top of these rows and allow them to set.

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.

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. ecofinishes is not responsible for dimpling.

floating installation








Make sure subfloor is tested for moisture content first and is properly prepared.

Lay an underlayment with moisture vapor retarding capabilities: butt and tape or overlap and tape edges (use underlayment manufacturer's recommendations. Run the outside edges of film up perimeter of each wall 4" (trim after flooring installation is complete.)

Installing the floor: Start first row with groove toward wall. Glue end joints of first row by applying a small but continuous bead of T&G adhesive to bottom side of the side groove. Always leave at least a 1/2" 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" apart.

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.

after installation

-  If you decide to cover the floor (to allow the other construction trades to continue working) to protect the floors prior to final cleanup and turnover to the owner, use an approved breathable product to cover the floors and do NOT tape directly to the floor, but tape cover product to itself. 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 sensitive blue or frog tape; this tape is designed for use on finishes, and other tapes may pull and damage the finish when removing it.
-  Remove expansion spacers and reinstall base and/or quarter round moldings to cover the expansion space.
-  It is suggested that you buff the floor with lamb's wool pads in order to pull any splinters and to remove any residues and handprints/foot prints, etc.
-  Install any transition pieces that may be needed (i.e., reducer, T-moldings, nosing, etc.).
-  Do not allow foot traffic or heavy furniture on floor for 24 hours (if glue-down or floating).
-  Dust mop or vacuum your floor to remove any dirt or debris.
-  Following these instructions as well as the guidelines set forth by the NWFA allows for the best chance for a problem free installation.