

INSTALLATION INSTRUCTIONS

For the Engineered Wood Flooring Products

PLEASE NOTE: Rustic Grade Flooring is designed to contain open wood character including knots and splits. Touching up the floor with maintenance products like fill sticks, markers, prefinished putty and stains can be part of your occasional maintenance. During installation it is important to inspect each board and select out boards with character that have opened up or become loose. Anything installed must be approved for soundness and quality by the installer.

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) Understanding how the floor will look once installed – the installer and owner must meet prior to installation to review:
 - a. 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:
 - i. 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.
 - ii. Color/Graining - do certain dark/light pieces or wild grained need to be graded out to meet the owner's expectations?
 - iii. 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.
 - iv. 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.
 - v. 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 the 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!! The person installing the floor is responsible for visual issues once the flooring is installed.

- 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.
- 3) Keep a Permanent Job Record
- 4) Make sure the owner understands that wood and water, (as well as overly dry conditions), do not mix as wood flooring is a natural material and will shrink/cup/move when over-dried and will expand/swell, delaminate, warp and buckle/cup when over-wetted.
- 5) Make sure the owner (and their cleaning service, if applicable) understands how to maintain the floor. Give them a copy of the Maintenance Instructions & Product Warranty.

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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, finish peel, 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, crack/check, finish peel, 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

The HVAC must be running prior to beginning the installation.

Carefully examine the flooring prior to installation for grade, color, finish and quality. Ensure adequate lighting for proper inspection and make sure you review all different lots of material before beginning. If flooring is not acceptable, contact your distributor immediately and arrange for replacement. We are not responsible 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. We are 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.

We cannot be held responsible for site conditions. Flooring formats, such as plywood based engineered wood flooring, are 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.

In most areas of the country, 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.

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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 75% using an in-situ RH probe, 3lbs using a calcium chloride test, and 3.5 as measured with a Commercial Concrete Moisture Meter

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.

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 leveling compound.

Do not install on concrete unless YOU ARE SURE it stays dry year-round. All concrete should be tested for moisture using an in-situ RH probe (result must be 75% or less) or Calcium Chloride testing (result must be 3 lbs per 1000sf or less). If uncertain the subfloor will remain dry, we recommend using a vapor barrier.

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 a moisture barrier first and then glue the wood flooring on top.

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. The manufacturer is not responsible for site related moisture issues.

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: When a product is approved for radiant heat, use only floating installation over radiant heat. Subfloor should never exceed 80°F. A data logger may be required for this product over radiant heat. Check with radiant heat manufacturer's suggested guidelines to limit the maximum water temperature inside heating pipes. Switch off heating unit one or two days before flooring installation and bring heat up slowly after installation.

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INSTALLATION TOOLS

For all installation methods:

- Tape measure
- Tapping block (or trimmed piece of flooring)
- Pencil
- Pry bar
- Chalk line
- Wood or plastic spacers (1/2")
- Crosscut power saw
- Hammer

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

- Flooring adhesive manufacturers
(Note: Use only urethane or silane adhesives – **DO NOT USE** water based mastics as they can cause this floor to fail)
- On concrete slabs, which are on/below grade, we recommend installing a moisture barrier first and then installing the wood floor on the moisture barrier or using an approved Adhesive Brand Moisture Barrier System
- Trowel per flooring adhesive manufacturer's recommendations.

For nail-down and glue assist installation, you will also need:

- Industrial Flooring Stapler or Nailer with adapter shoe to assure the proper position for the nail/staple
 - 1-1/2" to 2" long staples (20 gauge)
 - 1-1/2" L-shaped cleats (20 gauge) – 1-1/4" is acceptable if the cleat has a barbed edge
- **Please Note: the fastener length must be at least 1-1/2" in length (1" is not acceptable) some OSB Subfloors do not provide sufficient fastener holding power. In this case adhesive should be applied to the back side of the board mainly under the groove.**
- Air compressor
- Flooring Adhesive - for Glue Assisted Nailing. Products wider than 5" wide, in addition to the use of mechanical fasteners, assisted glue applications is recommended by the NWFA. The glue should be specifically designed for flooring and applied in a serpentine pattern to the back of each board or in a straight line along the groove side edge of each board and along the ends. Then follow the recommended fastening pattern.

For floating installation, you'll also need:

- Underlayment
- Flooring Tongue and Groove adhesive

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)

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- Resilient tile & sheet vinyl (floating/glue-down only)

STARTING YOUR INSTALLATION

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 cull out pieces that do not meet those expectations.

To draw planks together, always use a tapping block, (a short piece of flooring), and hammer, as tapping the flooring itself will result in edge damage. When near a wall, you can use a pry bar to pry close the side and end joints. Take care not to damage edge of flooring. For glue down & floating applications, use 3M Blue 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 1/2" 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.

You may want to dry lay a few rows, (no glue or nails), before starting installation to confirm your layout decision and working line.

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RECOMMENDED - GLUE-DOWN INSTALLATION

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 moisture barrier first and then gluing down our wood floor over the moisture barrier.

Method #2: We recommend several Moisture Barrier Systems on which they provide a warranty that moisture will not pass through and damage your wood flooring.

Use only approved flooring adhesives. DO NOT use water based adhesives! Follow adhesive instructions for proper trowel size and adhesive set time before beginning installation of flooring.

After spreading the adhesive and allowing the recommended flash time, 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.

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: Remember to stagger end joints from row to row.

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.

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.

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RECOMMENDED - STAPLE/NAIL DOWN WITH GLUE ASSIST INSTALLATION

Please note: Glue Assisted Nailing - For products wider than 5" wide, in addition to the use of mechanical fasteners, assisted glue applications is recommended by the NWFA. The glue should be a premium flooring adhesive applied in a "ends and groove" or serpentine pattern to the back of each board. Then follow the recommended fastening pattern. It is always a good idea to test a small area before starting the installation.

Make sure subfloor is tested for moisture content first and is properly prepared. Use Industrial Flooring Stapler from a recommended manufacturer – air stapler/nailer with adapter or a stapler/nailer of your choice 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 a construction adhesive. 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 mastic 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. Dimpling is considered an installation error.

RECOMMENDED - FLOATING INSTALLATION

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

Laying an underlayment of polyfilm: If below or on grade, first lay a vapor barrier (e.g. 6-mil polyfilm) with seams overlapped 8". Fasten seams every 18-24" with duct tape. Run the outside edges of film up perimeter of each wall 4" (trim after flooring installation is complete.)

Underlayment: Lay Underlayment by butting edges, not overlapping. Tape full length of the seam.

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Installing the floor: Start first row with groove toward wall. Glue end joints of first row by applying a small but continuous bead of Flooring Tongue and Groove 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), 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 3M Blue 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 the 3M Blue Tape as this tape is designed for use on finishes and other tapes may pull and damage the finish when removing it. The blue tape should not be adhered to the surface of the flooring.
- 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", remove any residues and handprints/foot prints, etc. Touch up with
- Install any transition pieces that may be needed (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.

CLEANING, MAINTENANCE, & REFINISHING

Do NOT wet mop the floor! DO NOT allow your cleaning service mop the floor, if applicable.

Do NOT ever use a steam cleaner!

Some popular cleaners are too acidic or basic and will damage the urethane coating.

Use a neutral recommended cleaner and wipe dry immediately.

The consumer must know and monitor the relative humidity and temperature frequently inside their home or space.

Normal maintenance includes touch-ups on wood character or grain that has opened or loosened using a fill stick and marker. If raw wood becomes exposed STOP using liquid cleaners until the area is resealed using a putty stick.

One of the most important parts of the installation is making sure the consumer knows how to properly maintain the floor. The homeowner should know and record the current relative humidity and temperature. The homeowner should also know the acceptable relative humidity and temperature range that is allowed for this product and required for the warranty. Area rugs, runners and walk-off mats are a floor's best friend. Sweep and vacuum (without a beater bar) regularly.

Please obtain a full copy of the Maintenance Instructions from your retailer and make sure the consumer has a copy.

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