

INSTALLATION GUIDE FOR ALL HARDWOOD FLOORING TYPES: SOLID HARDWOOD & ENGINEERED HARDWOOD



Topics Covered by this Guide:

Responsibilities of Owners and Installers	Page 2
Site Preparation	Page 2
Subfloor Preparation	Page 3
Before You Begin	Page 3
Eco-Max™ Random Width Flooring	Page 4
Installation Methods:	
• Nail Down Installation	Page 5 & 6
• Glue Assist Installation	Page 6
• Glue Down Installation	Page 7 & 8
Final Touches	Page 8



Responsibilities of the Owner/Installer:

Before beginning installation, the owner and installer will ensure the environment and subfloors meet the requirements as indicated in the installation guide. This should also include a final inspection of the flooring to ensure the product conforms to the purchased product.

Starting the installation indicates an acceptance of the jobsite conditions, including subfloor conditions, proper acclimation of the flooring, moisture testing and environmental conditions (temperature/relative humidity).

Installed boards are considered accepted by the owner/installer, regardless of whether the owner is present at the time of installation.

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Site Preparation:

Hardwood flooring should be the last step of any construction or renovation project. All "wet work" (drywalling, painting, etc.) should be completed.

Solid Hardwood and Engineered floors should only be installed in an enclosed area with sufficient environmental controls to maintain temperature and humidity. This will ensure the floor and subfloor stay at a consistent moisture content to avoid excessive movement which can lead to cupping, cracks and other moisture related issues.

Prior to installation, the subfloor must be dry and basement and crawl spaces must be dry and well ventilated. Do not install solid hardwood or engineered floors in any high moisture environments such as full bathrooms or leak prone basements. To better acclimatize your worksite, ensure permanent HVAC has been in operation a minimum of 5 days before installation is to begin.

Moisture content of the subfloor and the flooring should be checked using appropriate methods. There should be no more than a 2% difference in moisture content between the subfloor and the flooring to be installed.

After installation temperature is to be maintained at 18-24 C (or 65-75 degrees Fahrenheit) with a constant relative humidity level of 45% (30%-50% range is acceptable). This is the range that is best for your health which is also best for your wood flooring.

Subfloor Preparation:

- ✓ Clean all dirt, curing compounds, drywall mud, sealers, paint, wax, grease urethane, or any other material that may affect the integrity of the flooring material or adhesives used in the installation process from the subfloor using the shop vac and low grit sandpaper.
- ✓ Ensure the subfloor system is structurally sound and fix any squeaks between the joists and subfloor.
- ✓ Preferred subflooring: $\frac{3}{4}$ " (23/32", 18.3mm) CDX grade plywood subfloor or $\frac{3}{4}$ " (23/32", 18.3mm) OSB subfloor with Joist spacing at 19.2" on center or less. Minimum subfloor requirements: $\frac{5}{8}$ " (19/32", 15.1mm) CDX Plywood, maximum 16" on center joist spacing. Per NWFA Guidelines.
- ✓ Using a levelling bar and level, ensure the subfloor is flat and level at all points. Fix any low spots with the appropriate leveling compound for the surface you are working on and remove any high spots by sanding them down. The maximum variation in level is to be no more than $\frac{1}{4}$ " in 10' or $\frac{3}{16}$ " in 6' for nail-down applications and $\frac{3}{16}$ " in 10' or $\frac{1}{8}$ " in 6' for glue-down applications per NWFA guidelines. On concrete floors grind high spots or use a Portland cement-based levelling material to fill the low spots. Be sure to follow the manufacturer's instructions on the levelling compound and only use products rated for flooring installation.

Complete a moisture check on the subfloor. Concrete subfloors should have no more than a 4.5% reading on a Tramex Concrete Moisture Encounter (Moisture Meter) and wood subfloors should have no more than a 12% reading with a pin type moisture meter and no more than a 4% variation between boards. If any moisture readings do not conform to these installation instructions delay installation until the subfloor has been allowed to properly dry. Using a dehumidifier as well as properly ventilating the work area may increase the drying speed of the Installation.

Be sure to properly plan your project and complete an installation sketch. Determine the starting point of your install keeping in mind the shape of your room as well as whether or not you will be installing in multiple rooms with hallways. Hardwood engineered flooring should always be installed at a 45 or 90-degree angle to the joists of the structure. This is to ensure the structural integrity of the floor and avoid any damages or defects that could be caused by inadequate subfloor support. To install flooring parallel to the floor joists, minimum layer consisting of $\frac{1}{2}$ " plywood underlayment must be installed over the existing subfloor or 2" x 6" braces between floor joists every 16", however some floor joists cannot be cross-braced.

Before You Begin:

Before beginning the installation of your flooring be sure to carefully check the product for colour, quality, and sizing. If you are not satisfied with your flooring contact your dealer immediately. Installing the product constitutes final acceptance of purchase and installed product may not be returned. Acceptance of product may only be done in its entirety, not by the individual bundle or individual plank. Wood is a natural product and as such can vary in colour, grain, and accenting characteristics from board to board. Samples should be used as a reference only and we can not warrant against any variation of these natural characteristics from the sample to the finished product. Minor width variations in planks are normal and expected as part of the look of the floor. If heights of the boards are slightly different small shims can be used to raise the lower pieces.

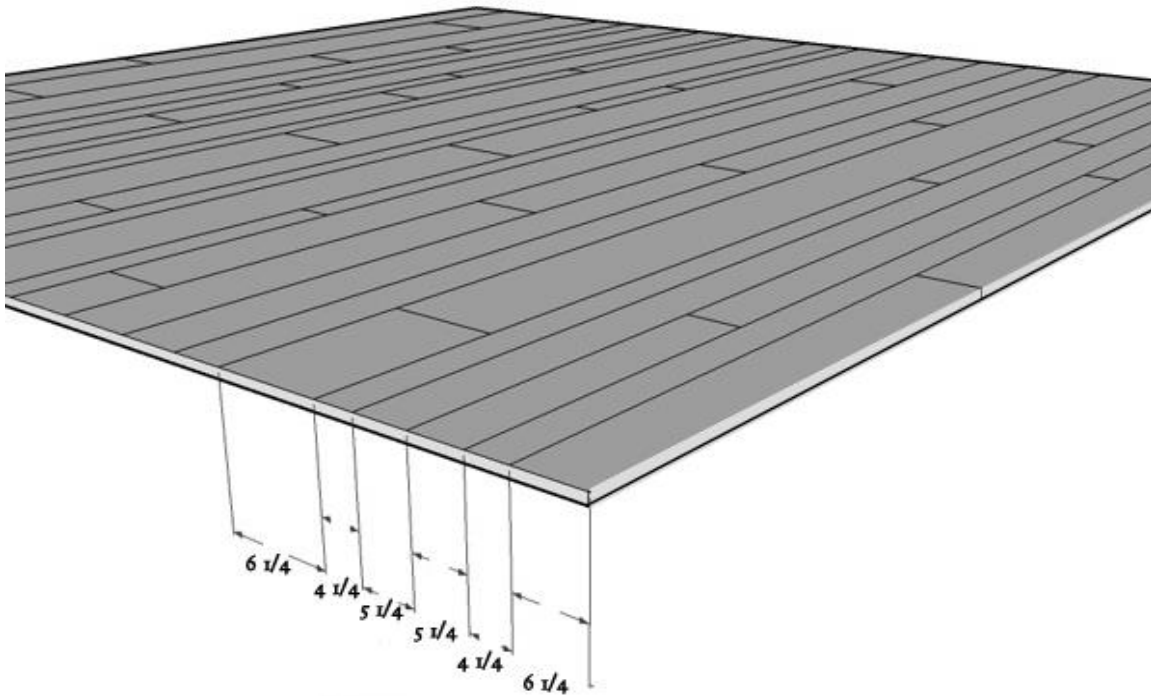
If You Purchased XL Rustic Flooring with Eco-Max™ Random Widths:

Planning to Install an Eco-Max™ Random Width Flooring

An **Eco-Max™** flooring purchase includes random amounts of all of the widths (in 1" intervals) within the specified range, for example an Eco-Max™ 3 1/4" to 6 1/4". The amounts you receive of each width will always be within sensible proportions (between 20% to 45% of the order). This yields a traditional non-repeating pattern. In other words, there is no pattern.

Please follow our recommended **"Glue Assist Installation" Instructions**. Installing a random width (**Eco-Max™**) floor is similar to installing an all one width or repeating pattern flooring. The widths that have the most lineal footage will repeat more often than those with less lineal footage. It is important to retain the tally information on your order to be able to determine the best mix of widths prior to installation. If you cannot find your tally sheet, please contact your retailer.

Note: Installing the flooring in an alternating pattern (ex. 4 1/4", 5 1/4", 6 1/4", 4 1/4", 5 1/4", 6 1/4") will cause you to run out of or have an overabundance of a particular width.



Installation Methods:

Nail Down Installation: Recommended for Solid Hardwood Flooring

*Note: Our floors must be secured to a solid subfloor. We do not recommend a floating installation of our products.
Do not install solid flooring over radiant heat.*

Preparation:

- ✓ Using a scrap piece, test the compressor Psi settings to ensure the flooring nailer is setting the staple or cleat to the proper depth. The fastener should not be set too deep as to compromise the integrity of the tongue and not too proud as to compromise the fit of the tongue and groove.
- ✓ Your flooring should be delivered at least 72 hours prior to installation. Heating and air conditioning should be on so that the flooring can acclimate to the conditions under which it will remain after installation.
- ✓ Our flooring is manufactured in accordance with accepted industry standards, which permit a defect tolerance not to exceed 5%. The defects may be a manufacturing or natural type. These defects are to be trimmed out during the normal course of installation. It is the responsibility of the buyer or buyer's representative to look for imperfections prior to installation. There is no warranty for hardwood installed with visible defects. **Installation of the flooring constitutes final acceptance, therefore if you have any concerns do not install the flooring.** It is the responsibility of the buyer to account for the additional 5% of total square footage needed when placing an order.
- ✓ Moisture content of the subfloor and the hardwood flooring should be measured. If the difference in moisture content of the hardwood flooring and the subfloor is more than 2%, installation should not proceed until the two are within 2% of each other.
- ✓ Hardwood flooring requires ½" – ¾" expansion space around the perimeter of the floor and at all vertical obstructions within the room. This space is covered by baseboard and quarter round after installation.
- ✓ As an added precaution, affix a vapour barrier directly over the subfloor to eliminate the possibility of moisture from the level below leaching into the hardwood flooring.
- ✓ Because of the natural variation in hardwood flooring, it is important to work out of 3 or 4 different boxes at a time to ensure a proper blend of shading. Close attention should be paid to date codes or "batches" as identified on the carton label, to ensure proper mixing or how it may affect layout of the floor. Be sure to randomly install different lengths to avoid patterned appearance in the finished product by staggering end joints a minimum of 6" between pieces on adjacent rows. Avoid "H-Joints" or "Stair Step" patterns.
- ✓ Proper nail spacing is one nail every 8"-10" with at least 2 nails in every board. Every board should be nailed so that there is a nail within the last three inches of both ends of the board.
- ✓ 2" nails should be used for machine nailing of this product.

Installation:

**Note: On products over 6" wide, including our XL-Rustic line of products, it is strongly recommended to use the glue assist method along with the nail down installation.*

- ✓ Select a starting point in the room. This is typically the longest run in the room. Keep in mind other factors such as room size, squareness of the room, and other obstacles may affect the starting point. The use of spline affords the ability to change direction of the installation. Staples and cleats penetrate the tongue of the flooring at an angle, like tent pegs and resist movement in the direction the fastener enters the subfloor. As a result, wood flooring has a tendency to expand mainly in the direction the tongue is facing. In larger rooms, the one-directional movement can cause problems in the floor as the flooring expands. Starting the installation in the center of a large room can reduce these potential problems by forcing the expansion to go in two directions. This will help to reduce cupping and cracking.
- ✓ When starting along a wall, begin laying boards tongue side facing away from the wall along the chalk line. Using brad nails or finishing nails secure the starter row along the wall edge placing nails 1-2" from the end of the boards and every 4-6" along the side. Using nail punch, set the nails below the surface of the flooring and fill the holes with the appropriately coloured filler
- ✓ Using the brad nailer, blind nail at a 45 degree angle along the tongue of the starter row using the same spacing as above. 1-2" from each end and 4-6" apart along the side. It may be necessary to use this blind nail the next 2-3 rows before you will have room to use the flooring nailer depending on the size of your floor. A minimum 1 3/8" long nail is recommended to ensure proper hold down.
- ✓ Double check the straightness of your first rows using the straight edge or level and make any corrections needed using a non-marking tapping block or pry-bar. Proper alignment on the first rows will make the rest of the installation process easier and prevent gaps and squeaks later in the installation.

Glue Assist Installation: Recommended for Engineered and XL-Rustic Flooring

Following the Nail Down Installation method and implementing the Glue Assist installation will help hold the flooring securely in place and help prevent squeaks in the floor.

A moisture retarder should be used for this process running 90 degrees (perpendicular) to the flooring. Install the moisture retarder, leaving 3/4" – 1" gaps between each row for the adhesive line. Applying adhesive to the vapor retarder will not effectively adhere the flooring to the subfloor. The gap between rows of vapor retarder is important for proper adhesion. Be sure to apply enough adhesive to cover the gap in the vapor retarder – approximately 1/4" bead. Work carefully to avoid getting adhesive on the face of the flooring, remove quickly if this occurs.

- ✓ Continue the installation nailing 1-2" from every end and 4-6" along every side. Continually check to ensure the flooring nailer is setting the staples or cleats to the proper depth. Be sure to randomly install different lengths to avoid patterned appearance in the finished product by staggering end joints a minimum of 6" between pieces on adjacent rows. Avoid "H-Joints" or "Stair Step" patterns.
- ✓ It may be necessary to cut the last row to the proper width. Rip the last row on the table saw ensuring the proper 5/8" expansion gap is left between the wall and the flooring product.
- ✓ The last few rows will need to be fastened by hand using the same blind nailing technique utilized at the beginning of the installation. It may be necessary to nail on the surface of the floor on the last row. To do this, either manually blind nail and/or face nail through the surface of the final planks using a brad nailer with a minimum 1 3/8" long nail. You may alternatively choose to drill a pilot hole and use a 1" long finishing nail. In this case, be sure to counter sink the hole and back fill with the appropriately coloured filler.

Glue Down Installation: *For All Hardwood Floors (Solid Hardwood, Engineered Hardwood)*

Preparation:

- ✓ Select a wall to start your installation on. Exterior walls tend to be straighter and square with the room, so when possible, try to start your installation there.
- ✓ Measure the width of two planks plus a 5/8" expansion gap from the wall. Mark this measurement at each end of the wall and snap a straight line using the chalk line between the two points.
- ✓ Secure a straight edge inside the chalk line before adhesives are applied. This is critical in preventing the movement of boards during installation which can cause mis-alignment.

Installation:

Be sure to follow the adhesive manufacturer's instructions on open time to ensure proper bonding to the flooring back.

- ✓ Using the adhesive manufacturers recommended trowel and application method, begin applying adhesive to the subfloor. Proper adhesive application is important to ensure sufficient spread of adhesive. Inadequate application of adhesive will not create a good bond and cause areas to lift or feel bouncy.
- ✓ Spread adhesive out from the straight edge approximately 2' and begin placing boards down. It is important to work in small sections to allow you to reach across the adhesive to install the flooring without putting weight on it. This allows for the proper transfer of adhesive to the flooring back
- ✓ Install the first row of starter planks with the tongue side of the board facing the straight edge and secure into position. You can use a low marking painters tape to help secure the boards in tight and prevent movement after placement, however tape must be removed within 24 hours to prevent damage to the flooring finish. BreezeWood is not responsible for finish damage caused by tape.
- ✓ Working in 2' sections, continue spreading glue from the installed boards and installing new boards. Always be sure to place the tongues directly in the grooves to avoid sliding boards across the glue surface. This is important for ensure proper adhesion. Be sure to keep the pattern random to avoid aligned end joints. A rubber mallet and tapping block may be used to knock boards in place and close any gaps.
- ✓ If any glue accidentally seeps between the tongue and groove, be sure to clean immediately – follow adhesive manufacturer's instructions on proper clean-up methods. Any foreign materials introduced between the tongue and groove may affect the connection and create gaps.
- ✓ Be sure to occasionally check from proper glue spread (90%) by lifting a board and looking for good coverage. The board may then be replaced back into the glue.
- ✓ When installing the final row, ensure the proper 5/8" expansion gap is still allowed. This may require you to rip the last row to the appropriate sizing on the table saw.
- ✓ Once the room is complete, remove the straight edge from the starter row and complete the installation in the same fashion as the rest of the room.

After installation, clean any glue from the surface of the installed floor using a damp towel or a method recommended by the adhesive manufacturer. Restrict foot traffic for 10-24 hours after installation and wait 24 hours before placing any furniture in the room. Wait a minimum of 72 hours before sanding any unfinished flooring installations. Any floor which is not flat should be weighted or rolled

using a 100-150lb roller with a non-marking surface. Adhesive will usually remain active for 30-60 minutes after installation but refer to the adhesive manufacturer's instructions for accurate open times. During the inspection, be sure to look for any scratches or imperfections that require touch-up. This is considered a normal part of installation.

Note: Never work on top of the installed flooring when using the glue down method. Always remove painters tape within 24 hours of installation to avoid marking. If using an acoustical underlay be sure the material is properly glued to the subfloor before beginning installation.

Reminder: Eco-Max random width flooring is not intended to be installed in an alternating width (ex. 4 ¼", 5 ¼", 6 ¼", 4 ¼", 5 ¼", 6 ¼"...) pattern. Doing so will cause you to run out or have an overabundance of a particular width(s).

Final Touches

After the installed, clean the floor by sweeping up any dust and debris left behind. If additional work needs to be completed, it is recommended that the floors are covered to protect them from damage. Builder's paper or a vapor permeable covering is a good choice. Do not use the empty flooring boxes which can trap moisture and cause cupping and cracking. Coverings should be secured in place with a low adhesion tape to the baseboards or other mouldings.

Note: Do not apply tape directly to the surface of the flooring as this may cause damage to the finish of the floor.

Before living on your newly installed hardwood floor, be sure to take the time to do a few finishing touches. Sweep or vacuum the entire floor and clean with the correct hardwood floor cleaner. Install any transition or moulding pieces and fill any nicks or minor gaps with the appropriate filler product. Be sure to protect your floor when moving heavy appliances or furniture across the floor with an appropriate padded or solid protector.