

TimberPlus™ Performance Wood Flooring Installation Instructions



TIMBERPLUS
HARDWOOD
REAL. DURABLE. WATERPROOF.

Mannington recommends the use of NWFA Certified Professionals for the installation of your new Mannington Hardwood Product. For further information, please see www.nwfa.org/cp-about.aspx

WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood

GENERAL INFORMATION

PRODUCT INSPECTION

Wood is a natural product, containing natural variations in color, tone, and grain. Color variation between planks is to be expected in a wood floor. Mannington cannot guarantee against natural variation in each plank, nor minor differences between samples and the color of the floor. With Mannington, you are protected by our exclusive Pre-Installation Limited Warranty. Return any planks you are not satisfied with, uncut, BEFORE installation and we will replace them. No questions asked. We urge you to inspect for color, finish, and graining BEFORE installation. Care should be taken during installation to remove or repair particular characteristics you do not desire.

"RACKING" THE FLOOR

This process is essential to achieve a random appearance. When starting the first few rows or courses, make certain to always measure from the groove end of the plank for cutting. As you continue working across the floor be sure to maintain a 12 inch minimum stagger between end joints on all adjacent rows. Stair step pattern should be avoided. Never waste materials; the ends cut from starter rows should be used at the opposite side of the room to complete rows.

NOTE: It is extremely important to blend planks from several cartons to ensure a good balance of color and graining.

NOTE: Mannington accepts no responsibility for costs incurred when a floor with visible defects has been permanently installed.

LONGBOARD

Longer and wider plank formats have been well received for their appearance and ease of installation. TimberPlus is a long/wide product. Please note when installing this format certain precautions should be taken to ensure a trouble-free installation. With longer length or wider width products, it is imperative to pre-check the planks and inspect for slight deformations. In manufacturing we make every attempt to remove any defective board. With the longer plank occasionally, you will find a board that may exhibit some crowning bow or end lift. This is to be considered normal for long length boards. The following are some tips for installing these boards and key recommendations:

- Long boards with slight deformation can be made installable by simply cutting in half and using for a starter or finish piece within a row. This will allow for an easier plank installation.
- Ambient humidity (RH) should not fall below 30% prior to, during, or post installation.
- If needed, use a short piece of flooring, a tapping block and hammer to completely draw sides tight.
- If zero deflection or "bounce" in the floor is a concern we do not recommend a floating installation for these types of flooring products.

JOB SITE CONDITIONS

While considered a best practice, Mannington TimberPlus™ does not need to be acclimated to the job site unless the flooring will be transported from one extreme temperature or humidity into another. Wood flooring performs best in climate-controlled interior environments. While TimberPlus is more resistant to seasonal changes, temperature fluctuations, and humidity ranges, a permanent HVAC unit has to be operational in order to provide consistent room temperature between 60° and 85°F (16° to 29°C) and a humidity level of 30% to 60%. Temperature and humidity has to be controlled for the life of the flooring. If there is a severe temperature or humidity difference, make sure to condition the cartons of wood flooring and UltraSpread EZ Adhesive™, if being used, a minimum of 24 hours before the installation.

If heating or air conditioning system is installed, it needs to be on and operating. If it is not possible for the permanent heating/and or AC system to be operating before, during and after install, a temporary HVAC system that mimics the permanent system has to be used until the permanent system is operating.

Jobsite should be clean and free of other tradespeople. Finished flooring should be properly covered/protected after it is installed.

Radiant-Heated Subfloors

Mannington TimberPlus™ Flooring may be installed over radiant-heated subfloors, provided the surface temperature of the hydronic radiant heat subfloor system does not exceed 85°F. Please note – this is a maximum temperature of the system before the floor is installed. Before installing over newly constructed radiant- heating systems, operate the system at maximum capacity to force any residual moisture from the cementitious topping of the radiant heating system. Then set the thermostat to a comfortable room temperature for the installation. Electric radiant Heating mats are acceptable if designed and warranted to be used with engineered wood flooring by their manufacturer. Electric heat mats should not exceed 80°F.

Subfloor/Underfloor

Recommendations & Preparation-All subfloors must be installed as recommended by their manufacturers. Warranties offered by Mannington Wood Floors do not cover problems caused by inadequate substrates or their improper installation. Make certain to check subfloor thoroughly for the following:

- Subfloor must be cleaned. Remove all oil, dirt, grease, wax, sealers, paint, adhesives, or any other substance that would hinder installation.
- Subfloor must be level to 1/4 inch per 6-foot span. To check, use a 6-foot level or straightedge over the subfloor. If the subfloor dips or crowns 1/4-inch or more in the span, it must be leveled. Use a cementitious patch or leveler to level low areas in the subfloor. If the floor has a crown or rise, level it by sanding to meet the 1/4-inch specification. Recommend subfloor meet L/360 as a reference.

Wood Subfloor

All wood subfloors must be structurally sound, dry, at least 3/4 inch in thickness, solidly fastened to appropriately spaced floor joists, and in compliance with all local building codes.

First, make sure subfloor is dry. Subfloor moisture content cannot exceed 14% prior to installation. To determine moisture content, use a quality moisture meter. All subfloor systems should be suspended at least 18" above the ground with adequate cross-ventilation. Cover the ground surface of crawl spaces with a suitable vapor barrier. All subfloors must be structurally sound, dry and in compliance with local building codes. Next, determine if subfloor is structurally sound. Use the following requirements as a guide:

- Planks may be installed (glued, or floated) to a single layer of 3/4 inch thick, tongue-and-groove plywood or 3/4-inch structural grade-oriented strand board (OSB) substrate over floor joists on 16-inch centers.

- If the subfloor is plywood or OSB less than 3/4 inch thick, add a second cross layer for strength and stability. To reduce the possibility of squeaking, install the underlayment per the manufacturer's guidelines.
- 19.2 inch and 24 inches on center joist spacing may be acceptable if the subfloor system is designed in accordance with local building codes and is free of deflection/meaning no vertical movement.

NOTE: Structurally sound wood floors will not have movements or deflections. Subfloor movement or improper subfloor installation will eventually cause squeaking. It is the owner's responsibility to be certain the substrate and substructure are in compliance with all local building codes.

CAUTION: Wood substrates directly fastened to concrete are not satisfactory for the installation of wood floor coverings. This non-ventilated construction practice will result in deterioration of the wood substrate system and may cause problems such as underlayment joint telegraphing. Mannington will not accept claims regarding performance of our wood flooring products installed over this subfloor construction.

Concrete Subfloors

All concrete subfloor systems must meet or exceed local building code specifications. For concrete slabs that are on or below-grade it is recommended that they be constructed so that ground water vapor cannot penetrate.

Basement and crawl space must be dry. If power washing is required, do so before flooring is installed and allow to subfloor and concrete to dry before installing flooring.

Suspended, above-grade concrete subfloors often require extended drying time to lose initial moisture. Suspended, pre-formed concrete plank construction requires a minimum of 1 ½-inch concrete topping to make it suitable for wood floor products. This type of construction may also require extended drying time. Curing and drying time will vary depending on the type of concrete mix and the environment in which it is placed. New concrete slabs require a minimum of 6 weeks' drying time before covering them with a wood floor.

You may install Mannington TimberPlus™ hardwood floors over concrete subfloors when you are using Mannington UltraSpread EZ Adhesive™ (glue-down method) or Mannington (floating method) if the subfloor is visually dry and has no history of moisture problems. As a frame of reference, calcium chloride test results should be 8 lbs. or less moisture vapor transmission, and the relative humidity (RH) in the slab should be 85% or less.

NOTE: Mannington Wood Floors' moisture release warranty is in effect only when Mannington UltraSpread EZ Adhesive™ is used.

NOTE: Moisture tests can only indicate conditions at the time of the test. Neither Mannington nor the flooring contractor can be responsible if moisture levels change in the future.

NOTE: Mannington does not recommend and cannot be held responsible for any failures related to the use of plaster-type patching compounds when used on any grade level of concrete underfloor.

Floating Installation

Mannington TimberPlus is a long side angle and head seam drop lock plank. This product requires a minimum 5/16" expansion gap around all fixed vertical surfaces. The room should not exceed 6,400 square feet and no greater than 80 linear feet in length or width. Consideration for transitions should be made at substrate changes, room to room environment changes, complicated layouts, and sub floor changes.

Note: please contact Mannington Technical Services for any jobs exceeding these parameters.

TimberPlus may be installed using the floating method with an approved laminate pad over numerous subfloors, including concrete, plywood, underlayment-grade composition board, ceramic tile, reinforced vinyl tile, fully adhered sheet vinyl and radiant-heated floors.

Special Tools

- Planks can be cut with wood working power tools. (Use a fine-tooth carbide blade)
- Guillotine cutter
- Block plane/hobby plane
- Any modifications use Mannington MegaGlue™ adhesive* (SKU #600021)
- Spacing wedges
- Safety glasses
- Tapping block (SKU #801926)
- Pry bar/pull bar
- Appropriate Mannington underlayment (see below for details)

Mannington Underlayments:

ComfortBarrier Plus™ Underlayment sheeting that combines a foam cushion layer and moisture barrier film all in one. Use it below-grade or on-grade subfloors where moisture is a concern.

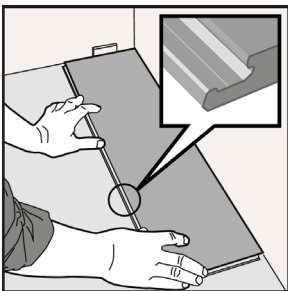
Silencer SR™ is an excellent underlayment choice, offering the best support, moisture protection, and sound absorption for the floor. Silencer SR™ is a high density, compression resistant moisture barrier and sound deadener with the added benefit of Ultra-Fresh™ anti-microbial to resist mold, mildew, and bacteria.

Job Preparation & Installation



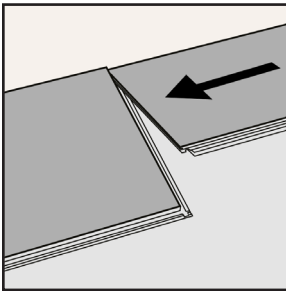
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- Undercut all door casings 1/16 inch higher than the thickness of the flooring and underlayment to be installed. Place a scrap piece of plank and a sheet of underlayment against the door casing to act as a guide and cut the door casing with a hand saw or power jamb saw set to the correct height. *Figure 1*
- After deciding the direction in which the planks will run, measure the width of the room (the dimension perpendicular to the direction of the flooring). The last row of flooring should be no less than 4 inches wide. If it is less, we recommend cutting the starter row narrower. This will require extra cutting, but it will make the rest of the installation easier and faster. NOTE: It is extremely important to blend planks from several cartons to ensure a good balance of color and graining.

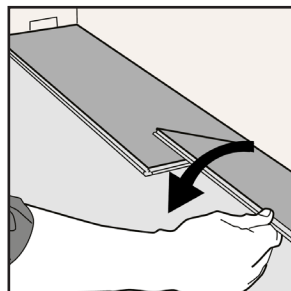


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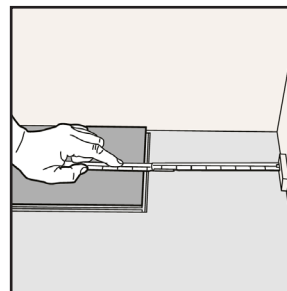
- Roll out recommended foam cushion pad. Install one sheet of the selected underlayment net along the starting wall. Unroll only one sheet at a time during plank installation to prevent damaging the underlayment. If any part of the underlayment is punctured or damaged during installation, seal the area with moisture resistant packaging tape. Position 5/16-inch spacing wedges around the entire work area. (Put two wedges together, face to face, and place on edge against vertical surfaces.) This will help prevent squeaking and scratching on the adjacent walls due to the up and down movement of the floor.
- First plank, first row. Facing the starter wall, start in the left corner. Long side groove facing out (product installs best, working tongue into groove). *Figure 2*



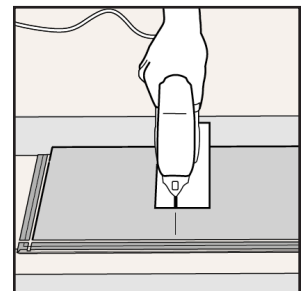
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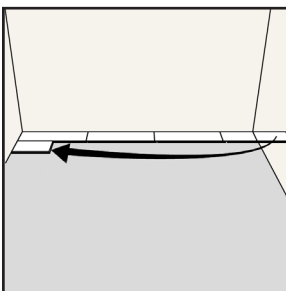
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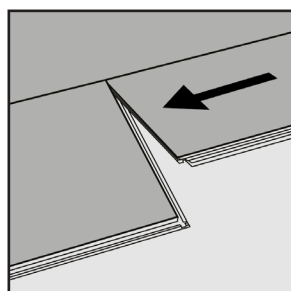
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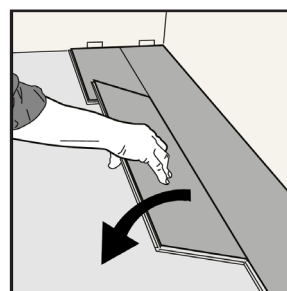
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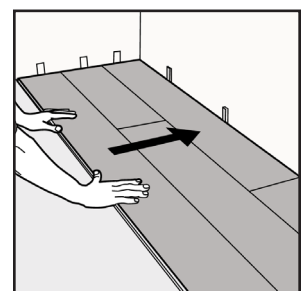
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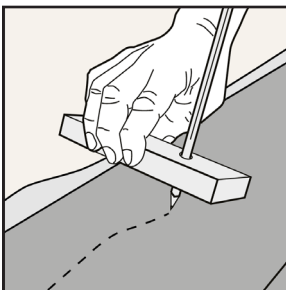


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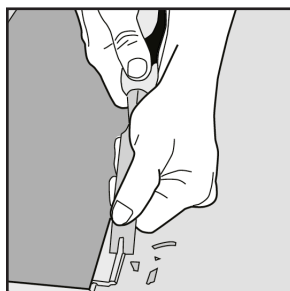
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- Carefully align the second plank (first row) drop lock over the first planks head seam groove. Make sure the planks are tight against each other. Afterwards press and firmly push at the short end just installed. You should hear a click as the short end locking system engages. *Figures 3 & 4*
- Continue working left to right until you reach the last plank in the first row. Measure to the wall and cut the plank 5/16" shorter to allow proper expansion. *Figures 5 & 6*
- First plank, second row. Starter planks should be a minimum 12" long. Additionally, the random stagger should be a minimum of 12". *Figure 7*
- Second plank, second row. Place the plank gently and tight to the short end of the previous plank. Fold the plank into place, you should hear a click as the short end locking system engages. If necessary, use a tapping block to ensure planks are tight. *Figures 8 & 9*
- Continue working across the room. Fold the planks down in a single movement with a slight press to the left to the short end of the previous plank. Make sure the planks are tight against each other both during and after this step.
- Once the first sheet of underlayment is covered with wood flooring, install the second sheet. Butt the two edges together and seal with moisture resistant packaging tape.

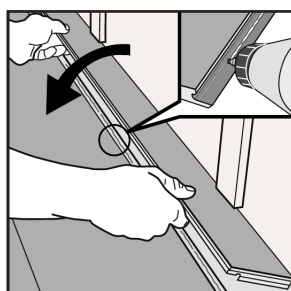


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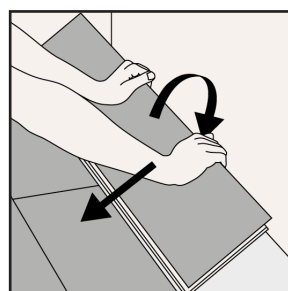
- The first and last row may need to be adjusted at an uneven wall. Use a scrap plank to direct scribe the row and then cut it using a jig saw. The last row will most likely require cutting to width, but it should be no less than 4 inches wide. To do this, lay the plank on top of, and edge to edge with, the plank in the next to the last row. Trace the wall contour on the last plank using a scrap piece of plank and cut as required. *Figure 11*



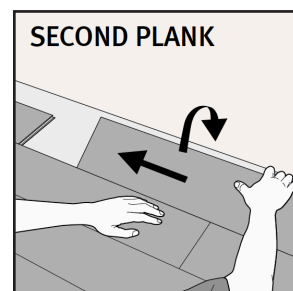
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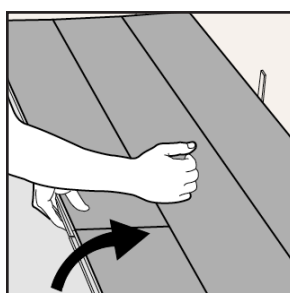
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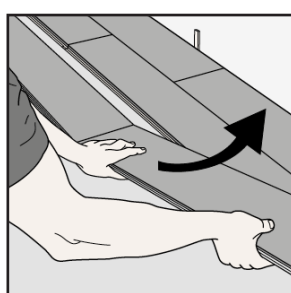
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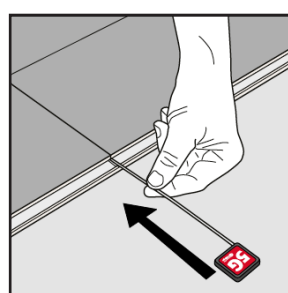
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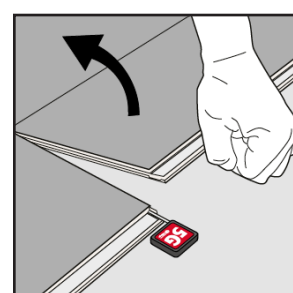
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19

o When angling the plank is not possible: Use a small block plane to remove the groove side ledge. Apply a bead of MegaGlue in the groove, push the planks together and use a blue releasable painter's tape to keep them tight. *Figures 12 & 13*

o When installing backwards (groove into tongue): Start from the left and work to the right. Connect the long side by angling the groove into the tongue of the previous plank. Fold down the plank. *Figures 14 & 15*

Connect the long side first, then slide the plank to the left to the 5G short end of the previous plank. Make sure the planks are tight against each other. Afterwards press and firmly push at the short end just installed.

o Dismantling an installed plank: When a plank is locked, it is not possible to take it up by hand. Separate the whole row by carefully lifting and slightly knocking just above the joint. Fold up and release the whole long side. After the whole long side is released, you can disassemble each plank by angling the short sides up vertically. *Figures 16 & 17*

Another way to dismantle the planks is by using a 5G dismantling tool. Put the dismantling tool into the space between the tongue and groove on the short end of the plank. Push the dismantling tool forward. The plank is now loose, and you can easily lift the plank up. *Figures 18 & 19*

- Remove any glue residue using a white nylon pad dampened with mineral spirits. Follow up with Mannington Ultra Clean spray cleanser.

Final inspection

After the floor is cleaned, inspect the floor for nicks, scratches, and planks that may have occurred during installation, as well as any other imperfections that need attention. Touch up nicks and scratches with Mannington Wood Floors touch-up products.

GLUE-DOWN INSTALLATION

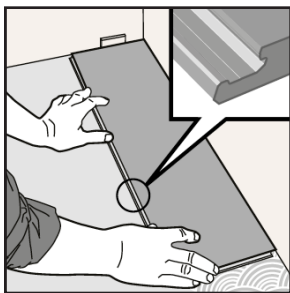
TimberPlus™ planks can be glued to approved subfloors using urethane-based Mannington UltraSpread EZ Adhesive™ and a minimum 3/16-inch x 5/32-inch V-notched trowel. This moisture-cured polyurethane adhesive forms a tenacious bond. UltraSpread EZ Adhesive™ has a minimum working temperature of 65°F. Never use UltraSpread EZ Adhesive™ below this requirement. Open time for UltraSpread EZ Adhesive™ is affected by temperature and humidity. As a general rule, the higher the temperature and humidity, the shorter the open time. The adhesive is V.O.C. compliant, nonflammable, contains 0% water, and has a very mild odor.

Special Tools

- Mannington UltraSpread EZ Adhesive™
- Mannington PROTVNX trowel 3/16-inch x 5/32-inch V-notched (minimum)
- Tapping block SKU# 801926
- 100-lb. roller

Job Preparation & Installation

- Before installation, do a calculation to determine the width of the last row of planks. If it is less than 4 inches wide, split the difference between the starter row and the last row. In any case, you will most likely be required to cut the last row of planks to width with a table saw.
- Select a starter wall. An outside wall is best because it's more likely to be straight and square with the room. Measure out from this wall, at each end, the width of two planks.
- Snap a chalk line from these points, parallel to that wall and perpendicular to the adjacent walls. Since most walls are not straight, the edge of some planks may have to be trimmed along the wall or cut to fit. (Although it is not necessary to leave an expansion space for Mannington Hardwood planks, it is considered a best work practice) NOTE: It is extremely important to blend planks from several cartons to ensure a good balance of color and graining.

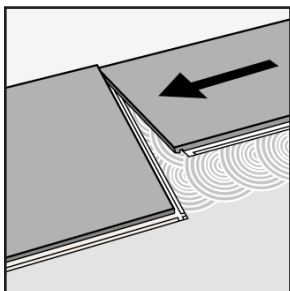


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- Spread Mannington UltraSpread EZ Adhesive™ from the chalk line out to the width of two planks with a minimum 3/16-inch x 5/32 inch V-notched trowel. Mannington recommends allowing the adhesive to set for 30 minutes. If desired, however, you may start laying planks immediately into wet adhesive.

- Install the first row of planks into position with the tongue side facing the starter wall. Proper alignment is critical. Misaligned starter rows can ruin the entire installation. Professional installers sometimes firmly secure a straightedge along the chalk line (2x4s work well), as a guide and this also helps to prevent planks from shifting in the wet adhesive. *Figure 1*

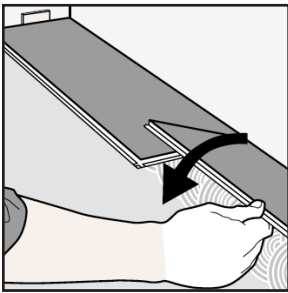
- TimberPlus™ precise locking system creates a very stable strong floor. But you MUST make sure all side seams and head seams are tightly locked into place.



2

- When the first two starter rows are secure, spread about 3 feet (4 rows of plank) of adhesive across the length of the room. (Never lay more adhesive than may be covered in approximately 3 hours. If the adhesive has set and will not transfer to the back of the plank, scrape up the adhesive and apply fresh Ultra-Spread EZ Adhesive™ adhesive.)

- Insert long side tongue into the groove and fold down into the wet adhesive. Note: If necessary, Mannington's hardwood tapping block can be used to fully seat the tongue into the groove. Avoid clustering the end joints. Stagger so that end joints are no closer than 12-inches. *Figure 2*



3

- Continue working through the job, spreading glue, cutting and installing planks as needed. The final row will most likely need to be cut; this row can be direct scribed to fit uneven walls. *Figure 3*
- See floating instructions above for more installation details.
- Retain a few leftover planks in case a repair is ever required. See below for more detail.

Clean any adhesive with mineral spirits or UltraClean spray cleaner. Roll floor with a 100-lb. roller. Cleanup UltraSpread EZ Adhesive™ from floor and tools with mineral spirits while still wet. Once the adhesive dries, it is very difficult to remove. If it dries on the floor's finish, use a urethane adhesive remover.

Final Inspection

After the floor is rolled and cleaned, inspect the floor for nicks, scratches, and planks that may have moved during installation, as well as any other imperfections that need attention. Touch up nicks and scratches with Mannington Wood Floors touch-up products. In typical climates, the new floor can accept foot traffic within 12 hours. Arid (dry) climates may require additional curing time.

REPAIRING TimberPlus™

- All planks should be inspected prior to installation.
- Small nicks, scratches or blemishes can often be fixed with a matching Mannington touch up marker or stick.
- Damaged plank(s) can be removed by carefully dismantling back to the affected area; replacing the damage planks with new and reassembling.
- Plank Replacement.
 - o Using a circular saw and or a multi-tool saw, cut out and remove the center of the damaged piece, leaving approximately a 1" strip attached to the surrounding material.
 - o Carefully cut back from the corners of the plank to the inside edge.
 - o Remove the edges by wiggling the cut plank out from the tongue and groove of the surrounding pieces.
 - o Prepare the replacement plank- Use a table saw to remove the leading edge of the tongue profile on the long side being careful not to damage the wood surface. Also remove the groove on the short end side by carefully cutting it off with a power miter saw. Once the plank is prepared, install the groove into tongue to test the fit. Once you check the fit, you are now ready to fully install.
 - o Position the replacement piece by engaging the groove into the tongue of the adjoining material. "Hinge" the prepared replacement plank into position.
 - o Slightly lift prepared side of plank and apply a bead of MegaGlue onto the three exposed seams. Carefully position plank into place and wipe excess adhesive from surface.
 - o Use a hand roller to assist in aligning the edges into position.
 - o Weigh down the replaced plank for at least 2 hours until and avoid traffic for 24 hours.

CAUTIONS AND MISCELLANEOUS

- Furniture should be moved onto the newly installed floor using an appliance hand truck over hardboard runways.
- Heavy furniture should be equipped with suitable non-staining, wide-bearing casters or protectors. Non-staining felt protectors are recommended for table and chair legs to help prevent scratching.
- Close your curtains or blinds where extreme sunlight hits the floor. Like with all floor coverings, protect the finished TimberPlus™ installation from exposure to direct sunlight. A combination of heat and sunlight can cause fading, discoloration or thermal expansion in most home furnishings. Avoid exposure to direct sunlight for prolonged periods. During peak sunlight hours, the use of blinds or drapes is recommended. Prolonged direct sunlight can result in discoloration and excessive temperatures may cause floor expansion, which may cause buckling or delamination.
- Use mats labeled "non-staining."
- Inspect all flooring prior to installation. If you have any questions or concerns, please contact Mannington's Customer Care team at 800-356-6787. Claims will not be accepted for product that has not been inspected prior to installation.

U.S. Patent 6,291,078; U.S. Patent 6,218,001; U.S. Patent 7,384,697 and other patents pending.

**Be sure to register your new floor at
Mannington.com/Register for a chance to win
\$100 and for proper warranty coverage.**



PATENTED SURFACE TECHNOLOGY

woodura®

Installed with
5G® Fold Down



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