

LAMINATE/NEUWOOD INSTALLATION GUIDELINES



IMPORTANT INFORMATION

Read all installation instructions and warranties prior to installing your Laminate floor.

Owner/Installer should carefully inspect all flooring material prior to and during installation for color, visible appearance, and milling defects. Product installed with visible defects or damaged during installation is not covered by warranty. Any material deemed unacceptable should not be installed. Rejection of material must be made for the complete order shipment, not box-by-box or piece-by-piece. Our flooring is manufactured within the accepted industry standards which allows for up to 5% of the product to be non-conforming. It is therefore recommended to add up to 10% to order quantities to allow for installation waste and non-conforming product. When installing in a diagonal direction to walls, add 18% to order quantities.

Inspect the Flooring: Inspect material from several boxes and get customer approval for appearance, color, and finish. Only after the flooring is approved by the end user should installation begin. During unboxing, set aside pieces that may not be acceptable if installed. If the culled amount exceeds 10% of the flooring material purchased, contact manufacturer before proceeding with installation.

ACCEPTABLE JOBSITE CONDITIONS AND PRODUCT INFORMATION

- Laminate Collection flooring planks are watertight if properly installed per instructions. This means no moisture will pass through the seam between properly seated planks as defined by the NALFA LF-01 standard. However, moisture can still pass through improperly seated seams, expansion breaks, and along walls.
- Liquids should be wiped up as soon as possible to prevent migration to the substrate.
- Laminate Collection flooring is not designed for continually wet or outdoor applications. Residential kitchens and laundry rooms are acceptable areas for installation, though they

are areas at greater risk for moisture exposure from leaks and overlooked spills.

- Laminate Collection flooring is constructed for floating floor applications only. Do Not Use adhesives or mechanical fasteners to attach the product in any way to the subfloor.
- **Heavy medical equipment such as wheelchairs, chair lifts, and medical beds will damage the floor locking mechanisms and floor finish. Damage resulting from these devices is not warrantied.**
- Permanent fixtures such as cabinets, vanities, radiators, and islands should be installed prior to flooring installation. Placing these structures on top of the flooring will damage the flooring and is not warrantied.
- Direct sunlight over extended periods of time can fade or discolor your floor. Use UV-tinting or window treatments to help protect your floor. Occasionally move rugs and other furnishings to avoid defined lines in the flooring.
- Laminate Collection flooring is designed from images of real wood. As a result, there are a limited number of images. Blend and mix planks during installation to randomize the natural features of the floor pattern.
- Before residential installation, acclimate flooring to the environment where the flooring will be installed for a minimum of 48 hours. Interior environmental conditions must be between 60°F and 80°F and Relative Humidity (RH) of $\leq 60\%$. Once this is done, Laminate Collection planks are ready to install.
- Commercial installation must remove planks from the carton and lie flat for at least 48 hours prior to installation. Maintain room temperatures between 60°F and 80°F and a RH of $\leq 60\%$.
- Laminate Collection flooring can be installed over radiant heat floor systems when certain conditions are met and maintained.
 - Radiant heating systems should be operational 7 days prior to installation.
 - The system should be turned off at least 4 hours before installation begins.
 - After installation, the temperature should be gradually increased. No part of the flooring surface should exceed 26°C/80°F. Consult heating system manufacturer for compatibility with flooring type.

NOTE: Laminate flooring is composed of mostly wood fiber which expands and contracts in response to its environment. Radiant heat systems that heat unevenly or excessively can cause joint separation between planks and plank distortion.

SUBFLOORS

The subfloor must be flat, meeting a minimum tolerance of 1/8" deviation up or down in a 3' radius. The flooring installer is responsible for a level and flat subfloor. Vertical deflection of the flooring can lead to plank damage and separation over time.

The subfloor must be dry. Excessive moisture in the subfloor can lead to problems in the installed flooring. Correct subfloor moisture issues prior to flooring installation.

NOTE: Damage to Laminate Collection flooring planks, or to the subfloor, caused by mold, mildew, hydrostatic pressure or excessive moisture content in the subfloor are not covered under warranty.

The subfloor must be clean. Construction debris, dirt, dust, and all other foreign substances must be removed from the subfloor prior to installing Laminate Collection flooring planks.

IMPORTANT: Do not sand, dry sweep, dry scrape, drill, saw, beadblast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphaltic "cutback" adhesive, or other adhesive.

THESE PRODUCTS MAY CONTAIN ASBESTOS FIBERS AND/OR CRYSTALLINE SILICA. AVOID CREATING DUST. INHALATION OF PARTICLES CAN CAUSE SERIOUS BODILY HARM ESPECIALLY TO THE RESPIRATORY TRACT. INDIVIDUALS WHO SMOKE WHO ARE EXPOSED TO ASBESTOS FIBERS HAVE INCREASED RISK OF SERIOUS BODILY HARM. UNLESS POSITIVELY CERTAIN THAT THE PRODUCT IS A NON-ASBESTOS-CONTAINING MATERIAL, YOU MUST ASSUME IT CONTAINS ASBESTOS. LOCAL STATE REGULATIONS MAY REQUIRE THE MATERIAL TO BE TESTED TO DETERMINE ASBESTOS CONTENT. CONSULT A CERTIFIED ASBESTOS TESTING LAB FOR FINAL DETERMINATION AND REMOVAL BEFORE DISTURBING EXISTING RESILIENT FLOORING, BACKING, LINING FELT,

ASPHALTIC "CUTBACK" ADHESIVE, OR OTHER ADHESIVE.

ACCEPTABLE SUBFLOORS

- Concrete
- Plywood and OSB,
- Tile, Terrazzo, and Marble
- Resilient Flooring without padding or cushioning

CONCRETE SUBFLOORS

- Level concrete subfloors by grinding high spots and use a cement based leveling material with a minimum compressive strength of 3000 psi to fill all low spots. Follow the leveling compound manufacturer's instruction. Leveling compounds must be allowed to dry and thoroughly cure prior to flooring installation.

Note: The flooring installer is responsible for determining if the subfloor is dry enough to install flooring. Laminate Collection flooring should never be installed in areas with excessive moisture.

- Concrete slab moisture content cannot exceed 4 lbs. per 1,000 sq ft per 24 hrs. on an ASTM F1869 Calcium Chloride test and cannot exceed 70% RH on an ASTM F2170 in-situ relative humidity test. The subfloor should be tested in 10 separate areas for every 1,000 sq ft to ensure adequate sampling. If the slab falls outside of these limits, proper moisture abatement is required.
- **Trapped moisture underneath Laminate Collection flooring can cause damage to the surrounding structure and create conditions that adversely affect the structure of the flooring planks. Such conditions can develop even after the slab has tested as being dry. For the long-term success of the product and dwelling, 6-mil plastic or an approved roll-on moisture barrier must be used between the flooring and concrete subfloor. Plastic seams must be overlapped 6 inches and taped.**
- Concrete pH level must be between 7-9.
- New concrete slabs must be at least 60 days dry and fully cured.

ENGINEERED WOOD INSTALLATION GUIDELINES



- Concrete must be sound, free from chipping, flaking, and dusting.
- Adhesive residue from previous floor coverings must be completely removed prior to installing Laminate Collection flooring.

PANEL WOOD SUBFLOORS (PLYWOOD, OSB, PARTICLE BOARD)

- Do not install Laminate Collection flooring directly over dimensional lumber (e.g., 2x6" diagonal across joists.)
- All wood panel subfloors must be properly installed per the manufacturer's instructions and meet or exceed local building codes.
- Local building codes may only provide a minimum requirement for flooring systems. If deflection or bounce occurs in the subfloor, fasten an additional layer of APA rated sheathing to the subfloor.
- Particle Board and Waferboard subfloors are only acceptable if installed over structurally rated plywood and OSB. These subfloors, though, are prone to failure when contacted by moisture; Laminate Collection flooring does not prevent moisture damage to these subfloors.
- Loose panels must be fastened to the joists to prevent panel movement.
- **NOTE: Squeaks, creaking, cracking, or popping sounds are not covered under warranty as these are the result of installation and/or environment. Following these guidelines will help mitigate noise but may not fully prevent them.**
- Do not install Laminate Collection flooring planks over treated wood panel subfloors. Fasten an additional layer of APA rated sheathing over treated wood panel subfloors
- Crawl spaces must be dry. Inspect crawl space for signs of moisture.
- Do not place plastic sheeting between Laminate Collection flooring and wooden subfloor. Doing so can trap moisture against the subfloor resulting in damage.
- Crawl space must be a minimum of 18" from the ground to the underside of the joist.

- The crawl space earth (or thin "rat slab") must be covered 100% by a vapor barrier of 6-mil black polyethylene.
- Where the 6-mil black polyethylene ground covering is in place, the crawl space should have perimeter venting equal to a minimum of 1.5 square feet, per 100 square feet of crawl space.
- Crawl space vents should be properly located to foster cross ventilation.
- Unvented crawl spaces need ground covering of 6-mil black polyethylene, which must be overlapped 6 inches and be sealed or taped and run 6 inches up stem walls and vertical obstructions (support piers, drainpipes, etc.) Continuously operated mechanical exhaust and perimeter wall insulation or conditioned air supply and insulation must be provided.
- Wood panel subfloors must be tested with a pin or scan type moisture meter. The moisture content should not exceed 12%. The subfloor should be tested in at least 10 separate places for every 1,000 sq ft to ensure adequate sampling. Testing closer to plumbing fixtures, pipes, and other areas at risk for moisture is recommended.

TILE, TERRAZZO, MARBLE

- Laminate Collection flooring planks can be installed over existing hard surface flooring. For example, tile, terrazzo, and marble flooring must be stable, firm, fully bonded to the substrate, and dry.
- Tile grout lines and other gaps greater than 1/4" should be filled with a cementitious leveling/patching compound.
- Uneven tile or natural stone flooring should be smoothed with a cementitious leveling/patching compound.
- **NOTE: The structural integrity of Laminate Collection flooring is subject to the structural integrity of the hard surface flooring underneath. Problems in the underlying hard surface flooring can result in damage to Laminate Collection flooring.**

RESILIENT FLOORING

- Laminate Collection flooring can be installed over sheet vinyl and monolithic vinyl (poured vinyl) flooring.
- Vinyl flooring should not have an underlying pad. Excessive “padding” will cause a “bounce” or recoil to your new floor once installed and may result in damage to locking mechanism or plank separation.
- Do not install flooring over multiple layers of vinyl. Only one layer of vinyl flooring is acceptable as an installation surface given all the above criteria are adhered to.

INSTALLING THE FLOOR

- Utility Knife
- Plank cutter
- Jigsaw
- Table saw
- Ruler or straight edge
- Tape Measure
- Pencil
- Tapping Block
- Vacuum/Broom
- Pry Bar
- Pull Bar
- Rubber Mallet
- Wall Spacers or Wedges
- Drill and necessary bits, if needing to cut holes for pipes or in-floor electrical outlets.

JOB SITE PREPARATION

Inspect the Flooring: Inspect material from several boxes and get customer approval for appearance, color, and finish. Cull out pieces that may not be acceptable once installed. If the culled amount exceeds 10% of the flooring material, contact manufacturer before proceeding to installation.

NOTE: The manufacturer does not accept responsibility for any costs incurred when plank(s) with visible defects have been installed. Installation is acceptance of the product.

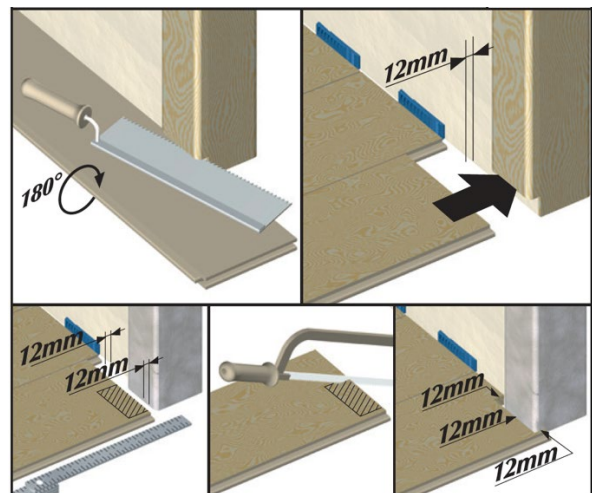
Ensure the Environment is Correct:

The environment must be between 60-80°F with a RH of $\leq 60\%$, and the permanent HVAC system must be operating prior to and during the installation.

NOTE: squeaks, cracking or popping sounds are not covered under warranty, and can be expected to some degree on floated floors. Proper subfloor preparation and flooring installation should minimize these noises.

Flooring Underlayment: Laminate Collection flooring with an integrated pad on the back of each plank is designed to be installed without an additional underlayment. Laminate Collection flooring without an integrated pad should be installed over a 1.5 to 3mm (about 0.12 in) pad designed for use with laminate flooring.

Undercut Door Casings: Undercut all door casings 1/16" greater than the thickness of the flooring being installed. To do this, use a scrap piece of flooring as a guide. Lay it on the substrate and cut the casing with a handsaw, oscillating saw, or a powered jamb saw set at the correct height. If the door frame is metal and/or cannot be cut, scribe planks to the door leaving 1/2" expansion gap between the floor and the door frame.



Blending of Cartons: Laminate Collection flooring planks are designed from real wood images. To achieve a natural appearance across the entire floor, we highly recommend opening and working from several cartons at a time. This will allow you to blend the planks for maximum aesthetic appearance. Make certain the room is well lit to

ENGINEERED WOOD INSTALLATION GUIDELINES

ensure color is consistent and that any visual defects can be seen and removed.

Match Transition Moldings: For best appearance, blend all transitions and moldings to planks that have similar color and imaging. Set them aside for use as needed.

Layout of Flooring: Laying out several rows prior to installation is essential to achieve a random appearance. Be sure to lay flooring perpendicular to the floor joists. Never waste materials; the end cuts from starter rows should be used at the opposite end of the room to complete rows and end cuts can be used to start subsequent rows.

Expansion Space: Expansion space around the room perimeter, fixed objects, and all vertical obstructions is required and should be at least 1/2".

Large Spaces: Laminate Collection flooring planks can be installed up to 26' x 26', with a 1/2" expansion gap. All runs over 26' in length or width must have an additional 1/2" expansion gap which can be covered with a matching trim molding. This rule applies for every additional 26' increment.

Doorway Transitions: It is recommended to leave 1/2" expansion gaps in doorways between rooms. This spacing allows flooring in each room to move independently. The spaces can be covered with matching trim molding.

INSTALLING THE FLOOR

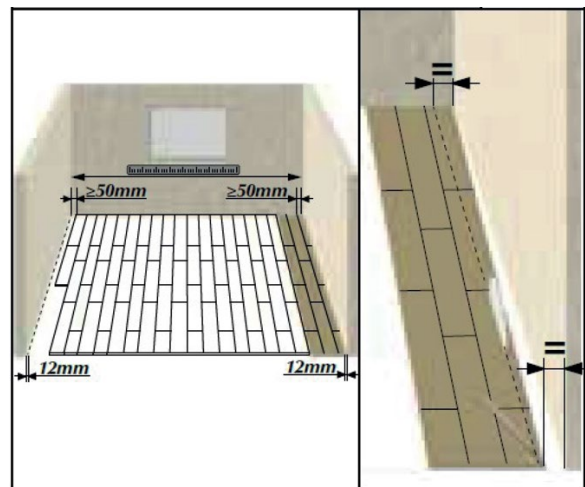
Notes:

- The Laminate Collection flooring is designed for floating installations only. Never fasten or adhere the planks to a subfloor.
- If your Laminate Collection Flooring does not have an integrated pad on the back of each plank, start by covering the subfloor with an underlayment pad, up to 3mm thick, approved for use with laminate flooring. Unroll and lay underlayment parallel with the direction the long edge of the flooring plank will be laid. Make sure that the proper side of the underlayment pad is facing the subfloor (this is designated by the underlayment manufacturer). Seal the rows of underlayment to each other per the underlayment instructions or by using a waterproof underlayment seam tape along the entire edge.

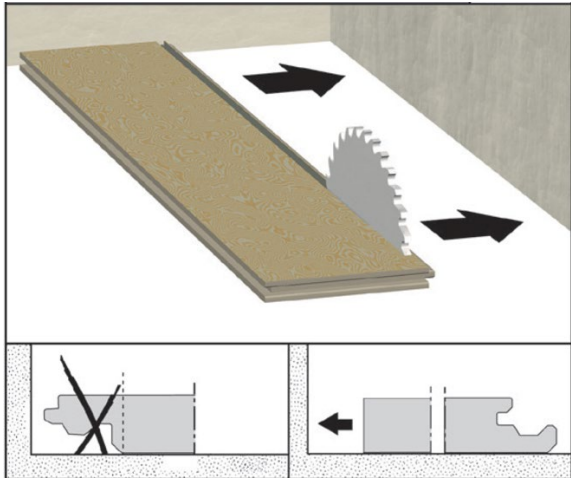
- An approved floating floor glue can be used between the tongue and groove provided it does not squeeze out and reach the subfloor. Use of this type of glue should be sparingly and will prevent the flooring from being disassembled without damage.
- Always work left to right and start along a wall or longest run for your first row.
- Planks should not be cut shorter than 1.5x the manufactured width.
- Cut planks by first marking the plank. Then cut using a jigsaw, circular saw, miter saw, or guillotine-type floor cutter. Refer to tool manufacturer's instructions for proper use and blade choice.

Steps:

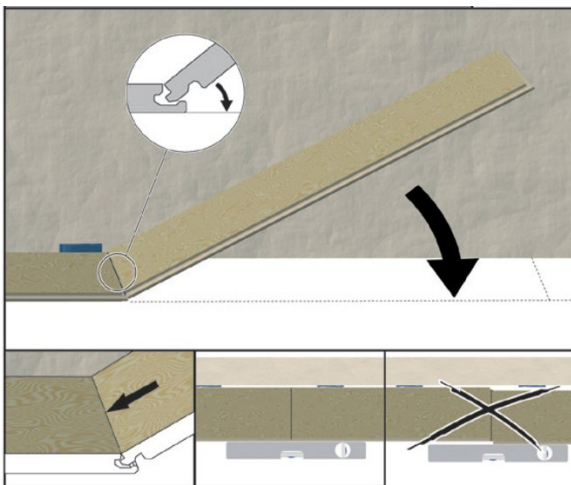
1. Plan the layout of the floor prior to installing the first plank. Proper planning will prevent narrow rows along walls and short pieces at ends of rows.



2. Set 1/2" spacers along all walls and fixtures in the installation space.
3. If needed, rip the first plank to the width needed for your floor's layout. The tongue side should be removed.



4. Place the first plank with the tongue side of the plank facing the starting wall.
5. Connect the short edge of the next plank to the end of the first plank by placing the tongue into the groove at roughly a 25° angle and fold the second plank down to the subfloor to lock the planks together. Check to ensure there is no gap between the planks.

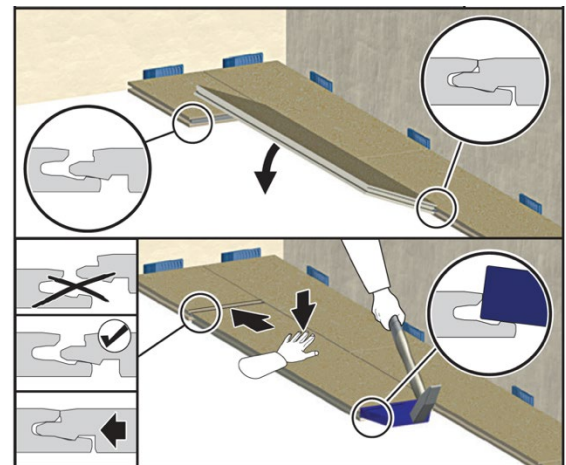


- Make sure the planks are square to one another by using a tapping block and soft rubber mallet to tap the planks into position. Check squareness with a straight edge or level.
- ****Always place tapping block against the side of the plank where it meets the top and NOT against the groove locking mechanism.****
- Improperly seated planks will cause installations to be out of square to the room, create a visual curve to the planks,

leave gaps, and cause subsequent rows to not seat properly.

6. Starting the second row, make sure the end seams are at least 1.5X the width of the flooring apart from the first-row end seams. (Example on 8" flooring: 8" x 1.5 = 12" apart). Cut the second row starting plank as necessary to ensure proper end seam spacing.

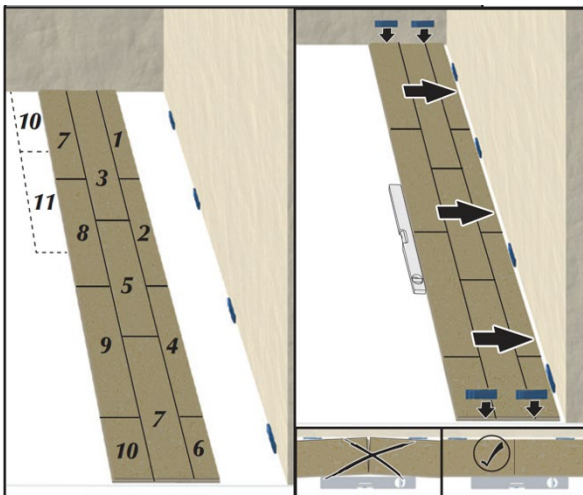
- Angle the second-row plank at roughly 25° and place the long-edge tongue into the groove side of the first-row plank. Fold down the plank to the subfloor to lock the seam. Use a tapping block and soft rubber mallet to make sure the seam is properly seated. Sometimes it helps to gently tap the plank as you fold it to the subfloor.



- Ensure there are no gaps along the full length of the seam.
 - The long edge seam must be properly and fully seated prior to inserting the short end of the next piece. Damage and misalignment of planks can occur if not properly seated.
 - The plank can be lifted out of place and reinstalled as needed to ensure the seams are seated properly.
 - **NOTE: Excessive force should not be used to force planks together. If the planks are not seating together while being lowered and tapped, ensure the planks are aligned properly and that the locking mechanism has not been damaged.**
7. Angle the next plank and place the long-edge tongue into the groove side of the first-row plank. Align the short-end tongue as close to

the first plank's end-groove as possible without them rubbing as the plank is folded down into place. Fold down the plank to the subfloor to lock the long-edge seam into place.

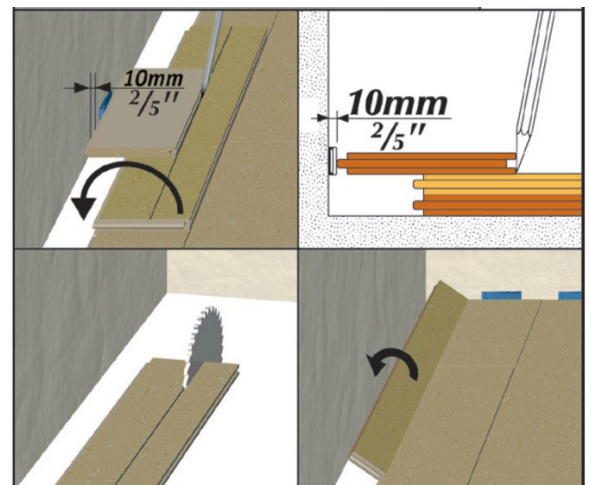
- Place a spacer between the start of the row and the wall to prevent the entire row sliding into the wall as new planks are added.
- Ensure the long-edge seam is tight with no gaps. Once the long-edge seam is seated properly, tap the short-end seam together but placing the tapping block on the opposite groove-side and tapping the two planks together. Use a soft rubber mallet to tap the seam in place. Make sure there are no gaps at the end seams.
- Cut the last plank to length ensuring there is proper expansion space between the end of the row and the wall. Save the leftover cut piece to be used as a starting piece in subsequent rows.



- Continue installing the second row according to these guidelines.
8. After assembling the first three rows, push the planks gently against the spacers on the wall.
 - Run a chalk line along the entire length of the inner row to ensure the planks are assembled in a straight line.
 - Adjust planks as necessary to ensure the first three rows are assembled square and in a straight line.
 9. Continue installing the remaining flooring rows following the method in Steps 6 and 7, making sure that each plank is square and

properly seated to its connecting planks. There should be no gaps between planks.

10. The last row of the installation may need to be cut to fit next to the wall. Measure the width of the final row, ensuring you leave a 1/2" gap (or wider). Mark the width to be cut on each plank of the last row measuring from the tongue side of the plank and cut using a table saw.
 - Install the plank into place as in Step 6. Use a pull bar along the wall to seat long edge seam. The pull bar should be resting against the cut side of the plank to pull it into place. Never use a pull bar against the tongue or groove side of a plank.
 - Continue to install as per this guideline until the last plank in the last row is installed.



Note: If you are not able to angle the panels (e.g., under a door frame or low fitted radiator) you can cut away the locking edge lip of the bottom of the groove by using a wood chisel, a small block plane, or table saw. Run a bead of glue on the modified tongue and groove. Tap the panels tight together by using a hammer and push block or pull-bar. If necessary, affix it with painter's tape until the glue is dry.

FITTING AROUND OBJECTS

- When cutting planks around objects, make sure not to damage the surrounding tongue or groove. Damaged locking mechanisms can lead to improper seating or movement between planks.

ENGINEERED WOOD INSTALLATION GUIDELINES



- Draw a template of the object on a piece of paper or thin cardboard.
- Place the template on the plank to be cut and trace the lines using a utility knife or jigsaw. Snap or cut the plank as needed to fit the template.
- Install the cut plank around the object following the installation guidelines above ensuring the proper expansion gap around the fixed object.

MAINTENANCE

- Install protector felt pads on all furniture.
- Place rugs at all entryways to catch dust, debris, and moisture. Clean rugs regularly.
- Use protective mats below rolling chairs and heavy furniture. Hard surface casters should not be used on rolling chairs. Use non-marring wheels and casters instead.
- Use colorfast mats that are non-rubber. Check mat manufacturer guidelines to ensure they will be non-marring and will not leave a residue on your new floor. Plasticizers from rubber or plastic mats can leave patterned impressions or marks on flooring.
- Under no circumstances should the floor be cleaned with a saturated cloth or wet mop soaked with liquid. Always ensure wet cleaning is done with a minimally dampened cloth.
- Vacuum or sweep with dust mop regularly to remove abrasive dust and dirt.
- Do not use household or furniture dust treatments, sprays, oils, or polishes to clean the floor as they will contaminate the finish.
- Keep high heels and other shoe bottoms in good repair as they can damage the floor. Do not wear cleats or other sharp point shoes on the floor.
- Keep pet nails trimmed to prevent scratching.
- Wipe up spills as soon as possible with a dampened cloth and approved cleaner.
- Remove stains with a cloth dampened with an approved cleaner.
- Remove standing water and other liquids right away.

DO NOT USE THE FOLLOWING CHEMICALS OR TREATMENTS

- Cleaners with Wax, Polish, or Oil
- Vinegar (with or without water)
- Dish soap and water
- Multi-Purpose Cleaners
- Ammonia
- Bleach
- Steel Wool or Scouring pad
- Steam Cleaners
- Vacuums with beater bars
- Wet sweeper pads
- Use a neutral pH fortified floor cleaner made for laminate flooring, wood flooring, or similar hard surfaces