Arbor Engineered Hardwood by mosaic

INSTALLATION INSTRUCTIONS

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v.6-24

IMPORTANT: Please read all the instructions before you begin the installation. Thank you for choosing Arbor Engineered Hardwood by Mosaic. If properly installed and cared for, your new flooring will be easy to maintain and will look great for years to come. These directions are based on industry standards and best practices. Failure to follow these installation instructions may result in damage to the flooring and void the floors warranty.

NOTE: All species of textured products (such as wire-brushed White Oak) can be stapled down with 20-gauge staples (1" minimum length for 3/8"-1/2" engineered hardwood, for 9/16" and 5/8" hardwood, use 1-1/4" fasteners).

For products wider than 5": In addition to the use of mechanical fasteners, assisted glue applications should be used. The glue should be a premium grade urethane construction adhesive applied in a serpentine pattern to the back of each board. Then follow the recommended fastening pattern.

General Information

Owner/Installer Responsibility

Beautiful hardwood floors are a product of nature and therefore, not perfect. Our hardwood floors are manufactured in accordance with accepted industry standards. For optimum performing hardwood flooring, carefully read and follow these installation instructions:

- These hardwood floors were manufactured in accordance with the accepted industry standards, which permit grading deficiencies not to exceed 5%. These grading deficiencies may be of a manufacturing or natural type. When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading allowance (10% for diagonal installations).
- The owner/installer has final inspection responsibility as to grade, manufacture, and factory finish. Inspection of all flooring should be done prior to installation. The flooring should also be carefully examined for color, finish, and quality before installing it.
- The installer must use reasonable selectivity and not use or cut off pieces with deficiencies, whatever the cause. Should an individual piece be doubtful as to grade, manufacture or factory finish, the installer should not use that piece. If material is not acceptable, do not install it and contact Mosaic immediately.
- Prior to installation of any hardwood flooring product, the owner/installer must determine that the job-site environment and the sub-surfaces involved meet or exceed all applicable standards. Recommendations of the construction and materials industries, as well as local codes, should be followed. These instructions recommend that the construction and subfloor be clean, dry, stiff, structurally sound, and flat. The manufacturer declines any responsibility for job failure resulting from, or associated with, subfloor and substrates or job-site environmental deficiencies.
- Use of stain, filler or putty stick for touch-up and appropriate products for correcting subfloor voids is accepted as part of normal installation procedures.

Storage and Handling

- Handle and unload flooring with care, storing it in a dry place. Ensure a four-inch air space under cartons for "on-grade" concrete floors. Delay flooring delivery until the building is enclosed, with windows, doors, and completed dry cement, plastering, and wet work.

Acclimation

- Stack cartons in the area where the new flooring will be installed, no more than eight boxes high. Be sure to evenly support each layer to avoid potential distortion. The cartons should be elevated using 2x4's and if placed on concrete, place a layer of 6mil poly down first.
- It is typically industry best practice to acclimate Engineered Hardwood products for a minimum of 48 hours prior to installation. To ensure your floors are properly acclimated, we recommend the use of an appropriate moisture meter and the testing of 40 random planks for every 1,000 square feet of flooring. Extended acclimation time may be advisable if the moisture reading is more than a 2% difference from the subfloor. Records should be kept of all readings.

ATTENTION INSTALLERS

CAUTION: WOOD DUST.

SAWING, SANDING AND MACHINING WOOD PRODUCTS CAN PRODUCE WOOD DUST. AIRBORNE WOOD DUST CAN CAUSE RESPIRATORY, EYE AND SKIN IRRITATION. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED WOOD DUST AS A NASAL CARCINOGEN IN HUMANS.

Precautionary Measures: If power tools are used, they should be equipped with a dust collector. If high dust levels are encountered, use an appropriate NIOSH-designated dust mask. Avoid dust contact with eye and skin.

First Aid Measures in Case of Irritation: In case of irritation, flush eyes or skin with water for at least 15 minutes.

WARNING: EXISTING IN-PLACE RESILIENT FLOOR COVERING AND ASPHALTIC ADHESIVES. 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 **existing in-place** products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the existing in-place product is a non-asbestos-containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication Recommended Work Practices for Removal of Resilient Floor Coverings for instructions on removing all resilient floor covering structures.

Arbor Engineered Hardwood does NOT contain asbestos.

Job-Site Conditions

- Ensure the building is enclosed with all doors and windows installed. Confirm that concrete, masonry, framing, drywall, paint, and other "wet" work are completely dry. Wall coverings should be in place, with painting finished except for the final coat on base molding. If possible, delay base molding installation until after flooring is installed. Basements and crawl spaces must be dry and well-ventilated.
- Exterior grading should be complete with surface drainage, offering a minimum drop of 3˝ in 10´ to direct flow of water away from the structure. All gutters and downspouts should be in place.
- Engineered flooring can be installed below, on, or above-grade level, excluding full Figure 1 and 2 bathrooms.
- Crawl spaces must be at least 18˝ from the ground to the underside of joists. Use 6-20 mil black polyethylene film as a vapor barrier, with lapped joints sealed by moisture-resistant tape. Ensure perimeter venting is at least 1.5% of crawl space square footage for cross ventilation.
- Maintain a consistent room temperature of 60-80°F and humidity of 30%-50% at the installation site for 14 days before and during installation and until occupied.
- Adhere to local regulations where necessary.

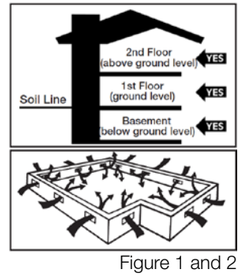

Figure 1 and 2

Subfloor Conditions

- CLEAN – Subfloor must be free of wax, paint, oil, sealers, adhesives, and other debris.
- LEVEL/FLAT – Ensure subfloor variation is within 3/16˝ in 10´ and/or 1/8˝ in 6'. Sand high areas or joints. For glue-down floors, fill low spots with a latex additive cementitious leveling compound of at least 3,000-PSI compressive strength. Follow the compound manufacturer's instructions, ensuring compounds are fully dry before installation. For mechanically fastened floors, flatten low spots using a maximum of 6 layers of 15#

builders felt, plywood, or shims - avoiding leveling compounds. The leveling materials must create a structurally sound subfloor without affecting fastener holding power.

- DRY – Check and document moisture content of the subfloor using the appropriate moisture test. Concrete subfloors must be a minimum of 30 days old before testing begins.
- STRUCTURALLY SOUND – Nail or screw loose or squeaky areas. Ensure wood panels have an adequate fastening pattern, following the system requirements, with a typical spacing of 6˝ along bearing edges and 12˝ along intermediate supports. Flatten edge swell as needed. Replace water damaged, swollen, or delaminated subflooring or underlayments.
- Avoid subfloors with excessive vertical movement. Hardwood floor products perform best when the subfloor exhibits minimal horizontal and vertical movement. Excessive vertical movement (deflection) before flooring installation is likely to persist after the flooring is in place.

Subfloors with Radiant Heat

- **NOTE:** Always make certain the product selected is recommended for this type of application. System must be operational and heated for at least 7 days prior to beginning the installation.
- Use an incremental control strategy that brings the floor through temperature changes gradually which may include an external thermostat.
- Turn off heat and let subfloor cool down to room temperature 3-4 hours prior to starting the job.
- BEFORE installation begins, ascertain that the heating system is designed and controlled for wood flooring and that the circuit does not include other floor covering types. Failure to do so may cause excessive heat damage and shrinkage.
- **NOTE:** Always make certain the product selected is recommended for this type of application. System must be operational and heated for at least 7 days prior to beginning the installation.
- After installation, turn the heating system back on immediately. The finished floor surface must not exceed 85°F throughout the life of the floor.
- Radiant heating systems normally create dry heat that can lower interior humidity levels. It may be necessary to add humidity with humidifiers to maintain the recommended levels (30-50%) and prevent damage to the wood floor.
- The flooring should be end-glued over radiant heat to reduce longitudinal shrinkage. Apply a bead of a recommended wood glue to the groove end and then insert the tongue. Wipe excess adhesive away immediately.

Subfloor / Underlayment Requirements Recommended Subfloor / Underlayment Surfaces

(Glue-Down and Floating Installations Only)

• Concrete • Ceramic Tile, Terrazzo, Slate & Marble • Acoustic cork

(All Installation Methods)

• Wood subfloors • Wood structural panels and underlayment • Fully adhered existing wood floors

• Fully adhered non-cushion vinyl sheet, resilient tile, cork flooring and linoleum

Concrete

(Glue-Down and Floating Installations Only)

Glue flooring to concrete with a minimum 3000 PSI strength adhesive, avoiding sealer or painted surfaces. Remove sealer or paint by grinding or sanding. Do not install over slick, heavily troweled, or burnished concrete; roughen the surface as needed using sanding or grinding, with proper safety precautions. Floating floors are suitable for any structurally sound concrete.

Concrete Moisture Tests

All concrete subfloors should be tested, and results documented, for moisture content. Visual checks may not be reliable. Test several areas, especially near exterior walls and walls containing plumbing. Acceptable test methods for

subfloor moisture content include:

- **Tramex Concrete Moisture Encounter Meter:** Moisture readings should not exceed 4.5 on the upper scale
- **NOTE:** The following tests are required in residential/commercial applications. Either or both tests are acceptable. If both tests are conducted, then both tests must pass.
- **Calcium Chloride Test (ASTM F 1869):** The maximum moisture transfer must not exceed 3 lbs./1000 ft.2 in 24 hours.
- **RH Levels in Concrete Using In-situ Probes (ASTM F 2170):** Should not Exceed 75%
- **NOTE:** “DRY” CONCRETE, AS DEFINED BY THESE TESTS, CAN BE WET AT OTHER TIMES OF THE YEAR. THESE TESTS DO NOT GUARANTEE A DRY SLAB.

Moisture Retardant Systems

If excessive moisture is present or anticipated, use a Moisture Retardant System or inexpensive sheet vinyl to reduce vapor intrusion.

- Apply the adhesive using the recommended trowel. Flooring can be installed immediately after applying the adhesive.
- **Sheet Vinyl:** Sheet vinyl or “slip-sheet” (felt-backed with vinyl wear layer) must be installed. Use a premium grade, alkali resistant adhesive and a full spread application system to properly bond the vinyl to the subfloor. Follow the sheet vinyl manufacturer’s instructions for installation procedures. A bond test may be required as an adhesion test. Install several small areas (3´ x 3´) and allow the vinyl to set for 72 hours. Remove the vinyl. If the backing remains attached to the concrete, the subfloor should be acceptable for sheet vinyl installation. Install the sheet vinyl and allow the adhesive to cure for 24 hours prior to beginning installation. Degloss as necessary to create an adequate adhesive bond. Always check for adequate adhesive bond.

Acoustic Concrete

(Glue-Down and Floating Installations Only)

Acoustic concrete normally contains large quantities of gypsum that may inhibit the adhesive’s capability to properly bond. Acoustic concrete must be primed with the concrete manufacturer’s recommended primer/surface hardener. Test the concrete by scraping the surface with a nail or other sharp object. If the concrete powders or crumbles, it is not sound and hardwood flooring should not be directly installed use of floating sub-floor system. Always check for adequate adhesive bond. The concrete must have a minimum compressive strength of 2000 PSI.

Ceramic, Terrazzo, Slate and Marble

(Glue-Down and Floating Installations Only)

All grout joints and broken corners that exceed 3/16˝ must be filled with a cementitious leveling compound Patch, Underlayment & Embossing Leveler with Underlayment Additive. The surface must be cleaned and abraded to create a good bonding surface for the adhesive. Loose tiles must be re-adhered to the subfloor or filled as above. Remove all sealers and surface treatments must be removed. Always check for adequate adhesive bond.

Acoustic Cork Underlayment

(Glue-Down and Floating Installations Only)

The flooring must be glued or floated directly over full spread, permanently bonded acoustic cork. The cork must have a density of no less than 11.4 lb./cubic foot. The cork, in general, should be pure cork combined with a polyurethane or resin binder. Install cork in accordance with cork manufacturer’s recommendations. Always check for adequate adhesive bond. When floating floors over cork **DO NOT** use foam underlayment.

Wood Subfloors and Underlayment

(All Installation Methods)

General: The wood subflooring materials must not exceed 12% moisture content. Using a reliable wood moisture meter, measure moisture content of both the subfloor and the hardwood flooring to determine proper moisture content. The wood subfloor should be checked at various locations throughout the installation approximately 20 readings or more

should be taken and documented. The difference between the moisture content of the wood subfloor and the hardwood flooring must not exceed 3%. When installing parallel to the floor joists it may be necessary to stiffen the subfloor system by installing an additional minimum of 3/8″ approved underlayment. Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

- **NOTE:** Spacing and spans, as well as their engineering methods, are the responsibility of the builder, engineer, architect, or consumer who is better able to evaluate the expected result based on site-related conditions and performance. The general information provided below describes common, non-engineered joist/subfloor systems. Engineered flooring systems may allow for wider joist spacing and thinner subflooring materials. When wider joist spacing of 19.2″ or greater is used at least one of the following options must be used:
- **Option 1:** When wider joist spacing of 19.2″ or greater is used, additional plywood subfloor material must be added to reduce movement and deflection.
- **Option 2:** In addition to the use of mechanical fasteners, assisted glue applications must be used. The glue should be a premium grade urethane construction adhesive applied in a serpentine pattern to the back of each board. Then follow the recommended fastening pattern.
- **NOTE:** Following one of these options is also intended to reduce noise associated with a mechanically fastened installation.

Wood Structural Panel Subfloors and Underlayment

(All Installation Methods)

Structural panels/underlayment must be installed sealed side down. When used as a subfloor, allow 1/8″ expansion space must be allowed between each panel. If spacing is inadequate, cut in with a circular saw. Do not cut in expansion space on tongue and groove panels.

- **Plywood:** Must be minimum CDX grade (exposure 1) and meet US Voluntary Product Standard PS1 performance standard or Canadian performance standard CAN/CSA 0325-0-92. The preferred thickness is 3/4″ as a subfloor [minimum 5/8″] or 3/8″ as underlayment.
- **Oriented Strand Board (OSB):** Conforming to US Voluntary Product Standard PS2 or Canadian performance standard CAN/CSA 0325-0-92 construction sheathing. Check underside of panel for codes. When used as a subfloor, the panels must be tongue and groove and installed sealed side down. Minimum thickness to be 23/32″ thick when used as a subfloor or 3/8″ as underlayment.
- **Waferboard and Chipboard:** Conforming to US Voluntary Product Standard PS2 or Canadian performance standard CAN/CSA 0325-0-92. Must be 3/4″ thick when used as a subfloor and 3/8″ thick when used as an underlayment.
- **Particleboard:** Must be a minimum 40-lb. density, stamped underlayment grade and 3/4″ thick.

Solid Wood Subfloors

(All Installation Methods)

- Minimum 3/4″ thick with a maximum width of 6″ installed at a 45° angle to the floor joists.
- The subfloor must be Group 1 dense softwood (Pine, Larch, Douglas Fir, etc.) No. 2 common, kiln dried with all board ends bearing on joists.
- For glue down applications a 3/8″ approved underlayment, must be added.

Existing Wood Flooring

(All Installation Methods)

- Ensure existing engineered flooring is securely bonded/fastened. For gluing over existing wood flooring, abrade or remove finishing materials to enhance adhesive bonding. When mechanically fastening, use existing engineered wood flooring that is at least 3/8″ thick, installed over approved wood/wood composite underlayment. If installing over engineered flooring glued to concrete, ensure the minimum thickness is 1/2″ to accommodate the fastener length.
- Existing solid wood flooring that exceeds 6″ in width must be covered with 3/8″ approved underlayment and fastened as required. Do not install over solid flooring attached directly to the concrete.

Vinyl, Resilient Tile, Cork Flooring and Linoleum

(Glue-Down Installations)

- Make certain the floor covering materials are well bonded to the subfloor/underlayment with full spread adhesive and are no more than two layers thick, not to exceed 3/16″.
- With approved wood/wood composite subfloors, if vinyl or tiles are loose, broken, or in poor condition, install a 3/8″ approved underlayment directly over the flooring materials.
- Clean flooring for a proper adhesive bond. If there's maintenance material or gloss, de-gloss with a flooring pad and commercially available stripper, then thoroughly rinse. Allow sufficient drying time. Note: Avoid sanding resilient products due to potential asbestos fibers, which can be harmful.
- Cork floors must have all sealers and surface treatments removed before installation begins. Always check for adequate adhesive bond.

(Mechanically Fastened/Staple-Down Installations)

- Do not install over floors that exceed one layer, as the thickness of the flooring materials will prevent an adequate mechanical bond.
- Make certain that the subflooring materials meet minimum requirements (see previous sections).
- Some tile products may be too brittle for staple penetration. Always test an area for breakage before proceeding.

Installing The Floor
Tools Required for Installation

(All Installation Methods)

- Broom
- Tape Measure
- Hammer
- Chalk line and chalk
- Hand saw or jab saw
- Recommended hardwood flooring cleaner
- Electric power saw
- Eye protection
- Recommended wood glue
- Moisture Meter (wood, concrete, or both)
- Transition and wall moldings
- NIOSH-designated dust mask

(Add for Glue-Down Installations)

- Recommended adhesive and adhesive remover
- Recommended Scotch® Delicate Surface Painters Tape 2080
- Recommended wood glue for floors exceeding 3-1/4" in width
- Recommended trowel

(Add for Mechanically Fastened/Staple-Down Installations)

- Hardwood flooring stapler for engineered hardwood
- 1″ Staples/fasteners (minimum) for 3/8″-1/2″, 9/16″, and 5/8″ products, 1-1/4″ fastener
- Compressor and hose
- Nylon/Plastic tapping block
- In-line regulator
- 20-gauge fasteners
- Recommended wood glue for floors exceeding 3-1/4" in width

(Add for Floating Installations)

- Premium underlayment for floating hardwood flooring
- Pull bar
- Tapping block
- Recommended wood glue

General Installation Tips

- All products may be stapled or mechanically fastened, but products over 5″ will require a serpentine bead of Premium construction adhesive applied to the back of the plank.
- Floor should be installed from several cartons at the same time to ensure good color and shade mixture.

- When possible, preselect and set aside boards that blend best with all horizontally mounted moldings used to assure a uniform final appearance. Install these boards adjoining the moldings.
- Be attentive to staggering the ends of the boards at least 4″-6″ when possible, in adjacent rows (Figure 3). This will help ensure a more favorable overall appearance of the floor.

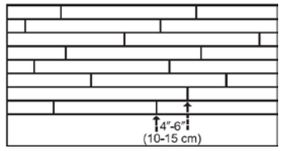

Figure 3
Preferred Alignment

- When installing engineered products of uniform length, begin the rows with starter boards cut to various lengths. Avoid staggering the rows uniformly to prevent stair-stepping. Boards cut from the opposite end of the row may be Figure 3 used for the next starter boards.
- Always allow a minimum 1/4″ expansion around all vertical obstructions. Allow 1/2″ for floating floors.
- **NOTE:** For Glue-Down Installation: When installing products wider than 3-1/4″, apply a bead of recommended wood glue to all the end grooves prior to installing into the adhesive. For Staple-Down Installation: When installing products wider than 3-1/4″ but not to exceed 5″, apply a bead of recommended wood glue to all of the end grooves prior to stapling down.

STEP 1: Doorway and Wall Preparation

(All Installation Methods)

- Undercut door casings and jambs, removing existing base, shoe molding, or doorway thresholds. These items can be replaced post-installation, ensuring door casings and jambs are undercut to avoid challenging scribe cuts (Figure 4).

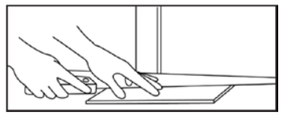
Figure 4

STEP 2: Establish a Starting Point

(All Installation Methods)

- Install parallel to the longest wall for optimal visual effects, unless the subfloor is reinforced to prevent sagging when installing perpendicular to the joists (Figure 5).
- Begin layout or installation from the straightest wall, typically an outside wall.
- Measure at least 18″ from the corner in two places, and snap a chalk line, ensuring the measurement accounts for the flooring width plus an additional 3/8″ to allow for expansion space and tongue width. For floating floors, allow a 1/2″ expansion.

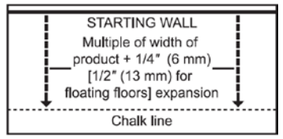

Figure 5

STEP 3: Installing First & Second Rows

(Mechanically Fastened/Staple-Down Installations)

- Use the longest, straightest boards available for the first two rows. For random and alternate width products, use the widest plank for the first row. Align tongue of first row on chalk line. The groove should be facing the starting wall. Pre-drill 1/2″ from back (groove) edge, 1″-2″ from each end, and at 6″ intervals when possible (Figure 6). Fasten using 4 or 6d finishing nails or 1″ pneumatic finish nails/brads. Countersink the nails (Figure 6).

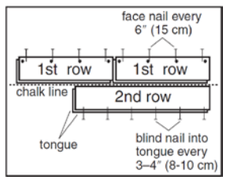

Figure 6

- Pre-drill and blind-nail at a 45° angle through the tongue of the first row every 1″-2″ from the ends and spaced in 3″-4″ intervals. Countersink nails to ensure flush engagement of groove with the following row(s). Continue blind nailing using this method with following rows until stapler can be used. Alternatively use a pneumatic finish nailer and install nails/brads at the same intervals with a minimum length of 1″.
- End-joints of adjacent rows should be staggered a minimum of 4″-6″ when possible, to ensure a more favorable overall appearance (Figure 3).
- If the Engineered Hardwood Flooring plank is wider than 5″ it must be installed applying a 1/4″ serpentine bead of Premium construction adhesive to the back of each board (Figure 7).

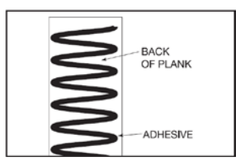

Figure 7

STEP 4: Installing the Floor

(Mechanically Fastened/Staple-Down Installations)

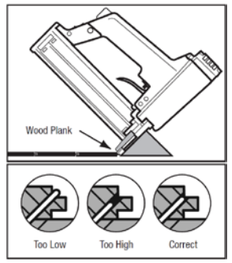

Figure 8

- Always use the correct stapler for the specific product being installed (see “Installation Applications”). Use a minimum 1″ staple recommended by the stapler manufacturer for 3/8″ to 1/2″ products and a minimum 1-1/4″ fastener for 9/16″ and 5/8″ products, 1″-2″ from the ends spaced at 3″-4″ intervals. Continue to Step 5.
- Set compressor at 70 PSI. If tongue damage occurs, lower air pressure (Figure 8).
- Fasten several sacrificial boards to the floor. At least two boards, stapled side by side, must be used to indicate proper machine adjustments.
- Check for surface damage, air pressure setting, tongue damage, edge blistering, etc. (Figure 8) before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the boards.
- Install the remainder of the floor working from several cartons.
- The last 1-2 rows will need to be face-nailed when clearance does not permit blind nailing with a stapler or a brad nailer. Pre-drill and face-nail or pneumatically nail on the tongue side, following the nailing pattern used for the first row.

General Information for Glue-Down Installations

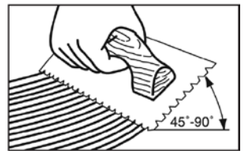

Figure 9

- When not in use, keep the adhesive container tightly closed to prevent thickening. Thickening will cause difficulty in spreading the adhesive.
- Open times and curing times of ALL adhesives vary dependent upon subfloor porosity, air movement, humidity, and room temperature. Urethane adhesive has a shortened working time in high humidity environments, whereas the working time for polymeric resin adhesives will be lengthened. In areas of low humidity, open time will be longer with urethane adhesives and shorter with polymeric resin adhesives. Adjust the amount of adhesive spread on the subfloor accordingly. The adhesive should not be applied if subfloor or room temperature is below 60°F. WORKING TIME WILL VARY DEPENDING ON JOB SITE CONDITIONS.
- Hold the trowel at a minimum 45° angle (see Figure 9), firmly against the subfloor to achieve a 50-60 ft.2 per gallon spread rate. The trowel leaves adhesive ridges with minimal adhesive between, allowing visibility of chalk lines and ensuring the recommended spread rate
- For additional application instructions, follow the recommendations on the adhesive container.
- Proper ventilation within the room to mitigate fumes. An electric fan is helpful.
- Rolling is not required, but if desired, do not do so until the adhesive has cured for two hours.
- **NOTE:** Do not install flooring using rubber mallets. Striking the surface with a rubber mallet may “burn” the finish causing irreparable damage.

STEP 3: Spread the Adhesive

(Glue-Down Installations)

- Spread sufficient amounts of the recommended adhesive with the recommended trowel in an area that can be covered in 60 minutes (see adhesive information).
- If necessary, nail a sacrificial row with 1″ nails on the dry side of your chalk line to help hold the first row in place.
- **NOTE:** Avoid installing on the surface of the flooring. If necessary, distribute weight using a kneeler board.

STEP 4: Installing the Floor

(Glue-Down Installations)

- Use the longest, straightest boards available for the first two rows. For random and alternate width products, use the widest plank for the first row. The first row of planks should be installed with the edge of the groove lined up on the chalk line. The tongue should be facing the starting wall. The first row must be aligned and

seated in the adhesive, as all additional rows will be pushed back to this original row. Remove tongue to allow for expansion space, if necessary, on the row adjoining the wall. Continue to Step 5.

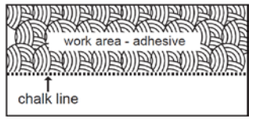

Figure 10a

- When installing products wider than 3-1/4″, apply a bead of recommended wood glue to all end grooves before installing into the adhesive.
- When installing pieces, engage the end-joint first, as close to the side (long) tongue and groove as possible, then slide together tightly to engage the side (long) joint (Figure 10a) tongue and groove. To avoid adhesive bleed- through and memory pull-back, avoid, as much as possible, sliding pieces through the adhesive when placing them in position.

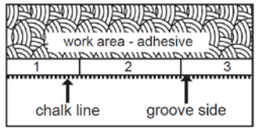

Figure 10b

- If adhesive skins over and fails to transfer, remove and apply new adhesive for proper bonding.
- **NOTE:** Clean adhesive from the floor surface regularly using the recommended adhesive cleaner. Avoid using Scotch® Delicate Surface Painter's Tape 2080 before removing adhesive. Use clean towels changed frequently to prevent haze and residue.

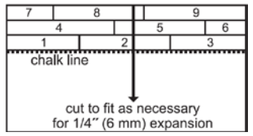

Figure 10c

- Check for a tight fit between all edges and ends of each plank. End-joints of Figure 10c adjacent rows should be staggered 4″-6″ when possible, to ensure a more favorable overall appearance (Figure 3). It may be necessary to align the product with a cut-off piece of scrap as shown (Figure 11), keep scrap angle low to avoid edge damage.
- To eliminate minor shifting or gapping of product during installation, use Scotch® Delicate Surface Painter's Tape 2080 to hold the planks together. After installation is complete, remove all the Scotch® Delicate Surface Painter's Tape 2080 from the surface of the newly installed flooring. Do not let the tape remain on the flooring longer than 24 hours. Avoid the use of masking or duct tape, which leaves an adhesive residue and may damage the finish.

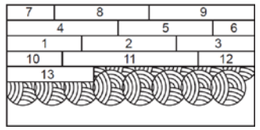

Figure 10d

- If necessary, use weights to flatten boards with bows until adhesive cures, to prevent hollow spots. Boards that cannot be flattened should be cut in length to reduce the bow or should be not used.
- Be sure not to spread adhesive too far ahead of your work area (Figure 10d).
- Complete the installation using this same technique for the remainder of the floor.
- Avoid heavy foot traffic on the floor for at least 24 hours. Lift the furniture or fixtures back into place after 24 hours.

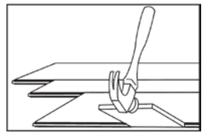
Figure 11

General Information for Floating Floor Installations

- Floating floors can be installed over any structurally sound surface that meets or exceeds local building codes. Any width of flooring can be installed in this manner, but wider widths are preferred.
- Plan the floor layout (in width) to avoid having to rip the last row narrower than 1″. This may require ripping the first row to assure the last row is at least the minimum width.
- Allow 1/2″ expansion around all vertical obstructions.

STEP 3: Installing the Underlayment

(Floating Installations Only)

- Install the underlayment in the same direction the hardwood flooring is to be installed.
- Extend the underlayment a few inches up the wall.
- Trim excess prior to installing trim or moldings.
- The floating floor underlayment already has double-sided tape for ease of taping the precut overlapping seams (Figure 12). If a non-adhesive underlayment is used, tape all seams with the included tape.

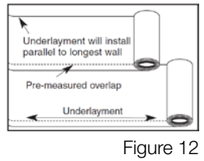

Figure 12

STEP 4: Installing the Floor

(Floating Installations Only)

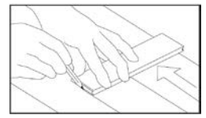
Figure 13

- Two methods for installing the first row after layout completion (see Step 2). Scribe the board if the wall is not straight (Figure 13). Use a sacrificial board with a straight edge and appropriate fasteners, ensuring the groove faces the wall.
- Align the first row with wedges to maintain 1/2″ expansion and stabilize the product. Scribe the first board if the wall is not straight (Figure 13).
- Select the first board for all additional rows, removing the tongue for expansion space if necessary. Apply a continuous 1/8″ glue bead to the inside bottom of the groove on the end of the board. Install with the groove side against the wall, using the longest boards. Follow tongue orientation for installation direction (Figure 14). If a sacrificial board was used, remove it; do not glue the first row to it.

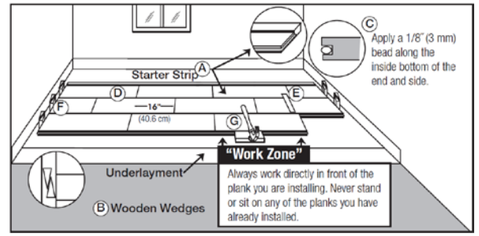

Figure 14

- Complete the first row, cutting the last board for 1/2″ clearance from the wall. Use the remaining cut end as a starter board for subsequent rows. Install a wedge on the end, allowing 1/2″ expansion. Avoid boards shorter than 16″ in the first four rows (Figure 14).
- Use a pull bar to pull the last board into place from the opposite end. Install wedges into the gap and tighten (Item B, Figure 14).
- If any glue gets on the surface of the flooring, wipe off immediately with a clean damp cloth.
- For the second row, cut or use a shorter board as the first one. Apply a 1/8″ glue bead along the inside bottom of the end and side groove of each new board. Install the first board, apply glue to the next, and install. When installing boards together, use a tapping block against the tongue (Item G, Figure 14) and tap into place with a hammer. Do not tap directly on the edge with the hammer. Complete the second through fourth rows using this technique. Insert wedges on the ends, as necessary, to restrain floor movement.
- In the remaining rows, stagger joints 4″-6″ apart. Install the rest of the floor. Be sure all joints are tight. Use spacers on the long and butt walls. Use a tapping bar to tighten the joints from the ends.

STEP 5: Complete the Installation

(All Installation Methods)

- Remove all tape and clean the floor with the recommended hardwood flooring cleaner.
- Trim all underlayment (floating only) and install or re-install any transition pieces, reducer strips, T-moldings, thresholds, bases and/or quarter round moldings that may be needed. These products are available prefinished to blend with your flooring (see page 13). Nail moldings into the wall, not the floor.
- Inspect the floor, filling all minor gaps with the appropriate blended filler.
- If the floor is to be covered, use a breathable material such as cardboard. Do not cover with plastic.
- To prevent surface damage, avoid rolling heavy furniture and appliances on the floor. Use plywood, hardboard, or appliance lifts if necessary. Use protective casters/caster cups or felt pads on the legs of furniture to prevent damage to the flooring.

Floor Repair

Minor damage can be repaired with a touch-up kit. Major damage will require board replacement, which can be done by a professional floor installer.

WARRANTY

Union Street, Avenue, Vinewood, and Evermore

50-Year Limited Lifetime Warranty on Residential Installations
Limited 10-Year Warranty on Commercial Installations

UNDERLAYMENT & ADHESIVES

Silicone Moisture Barricade 31.5” x 76.25” (200 sf) roll:

- Limited Lifetime Warranty
- 100% Recycled contents and a baked silicone coating
- Reduces vapor flow without trapping moisture
- Provides the NWFA required moisture barrier for staple and naildown installation

TEC Wood Secure Premium Wood Adhesive 4 gallon pail:

- Limited Warranty
- Ultra-low moisture vapor permeability for unlimited subfloor moisture control
- Ultra-versatility- Bonds acoustic underlayments up to 5 mm
- Installer friendly, easy to trowel and clean up, even after the adhesive is dried and completely cured


Empire Sun

TRIM OPTIONS

Color Coordinated Moldings

- All styles are 78” long.
- Available in coordinating wood finishes.
- Quick*SHIP*: Union Street collection Stair Nose, Threshold, and T-Molding only. All other items are Special Order with a 1-2 week lead time.
- All trim should be predrilled for nail holes to prevent splitting. Trim may be held in place using adhesive and nails or screws.

Flush Stair Nose - 2.75” W x 78” L

A full bullnosed shaped molding undercut for use as a stair landings trim, elevated floor perimeters, and stair steps. Fasten down firmly with adhesive and nails or screws.

Quick*SHIP*: Union Street Series

Threshold Molding - 2” W x 78” L

A beveled shaped molding undercut for use against carpet, ceramic tile, existing thresholds, sliding door tracks, or fireplaces that allows for expansion space as well as provide a smooth transition in height difference. Fasten to the subfloor with adhesive and/or nails through the heel.

Quick*SHIP*: Union Street Series

Flush Reducer Strip - 2.25” W x 78” L

A sloped shaped molding that may be used around fireplaces, doorways, as a room divider, or as a transition between hardwood flooring and adjacent thinner floor coverings. Fasten down with adhesive or small nails.

T-Molding - 2” W x 78” L

A sloped shaped molding used as a transition piece from one rigid flooring to another of similar height or to gain expansion spaces. Fasten at the bottom in the center of the molding. Additional rigid support may need to be added to the heel of the molding depending on the thickness of the goods covered. This molding should NOT be used as a transition to carpet.

Quick*SHIP*: Union Street Series

Quarter Round Molding - .75” W x 78” L

A rounded shaped molding used to cover expansion space next to baseboards, case goods, and stair steps. Predrill and nail molding to the vertical surface, as it should not be adhered to the floor.

CARE & MAINTENANCE

Union Street, Avenue, Vinewood, and Evermore

After installation, be sure to sweep up all trash and remove debris. If the floor was glued down, remove any residual Adhesive. Keep the floor covered with heavy paper or cardboard if there is to be additional construction work in the space. Do not cover with plastic. Do not leave painters or other tapes on the floor for more than 24 hours as it may damage the finish. Keep leftover material and store it in a climate-controlled space for future needs.

Care & Maintenance Guidelines

1. DO NOT CLEAN WITH WATER OR STEAM. This may permanently damage the floor and may void the warranty on your hardwood floor.
2. Area rugs are recommended in front of kitchen sinks, at all pivot points and within high-traffic areas. Do not use rugs with solid rubber or vinyl backings. The rugs must be made of a breathable material to prevent moisture entrapment.
3. Use interior and exterior doormats at all entrances to collect dirt and moisture and prevent it from being tracked onto the floor.
4. Protect your floor from direct sunlight. Use curtains and UV resistant film on large glass doors and windows. Move area rugs occasionally as they block sunlight and may give the appearance of discoloring under the rug.
5. Keep animal nails trimmed to minimize finish scratches.
6. DO NOT wear shoes with spiked heels or heel taps on your hardwood floor. Remove shoes at the door to avoid potentially dragging in sharp objects in your shoes treads.
7. Do not roll or slide heavy objects directly upon the floor. When moving appliances or heavy furniture, lay a plywood panel on your floor and gently “walk” the item across it. Carpet or cardboard is not adequate to prevent surface compression scratches.
8. Use floor protectors or protective caster/caster cups on the legs of furniture to prevent damage to the flooring. Make certain to keep them clean and well maintained.
9. Certain types of casters on furniture may damage hardwood flooring. Barrel-type caster wheels or wide, flat glides are best for protecting your hardwood floor. If your furniture does not have the right type of caster, we recommend that you change them. Replace hard, narrow furniture rollers with wide rubber rollers.
10. Keep the relative humidity in your home between 30% and 50%.

Humidity’s Impact on Your Floor

Seasons: Heating and Non-heating

To protect your investment and ensure that your floor provides lasting satisfaction, the following precautions should be taken to help control humidity levels in and around your floor. For best results, keep the relative humidity in your home between 30% and 50%.

- **Heating Season (Dry):** A humidifier is recommended to prevent excessive shrinkage in hardwood floors due to low humidity levels. Wood stoves and electric heat tend to create very dry conditions.
- **Non-Heating Season (Humid, Wet):** Proper humidity levels can be maintained by use of an air conditioner, dehumidifier, or by turning on your heating system periodically during the summer months. Avoid excessive exposure to water from tracking during periods of inclement weather. Do not obstruct in any way the expansion joint around the perimeter of your floor.

CARE & MAINTENANCE

Union Street, Avenue, Vinewood, and Evermore

Routine Care & Maintenance

1. Never use any of the following products (or products similar in nature) on your floor: ammonia-based cleaners, acrylic finishes, wax-based products, detergents, bleach, polishes, oil soap, abrasive cleaning soaps, or acidic materials such as vinegar. Many of these products can pit or etch the finish of your flooring or prevent the proper use of recommended maintenance materials.

2. Vacuum, sweep or dust mop your floor once a week, or more if needed. The vacuum head must be brush or felt, and a wand attachment is preferable. Do not use vacuums with beater bars or hard heads. A mop with soft cover is also highly recommended to eliminate finer particles of grit and dirt that can act like sandpaper on hardwood floors.

3. Spills and tracked-in dirt should be wiped up immediately. For spot cleaning, apply an appropriate Engineered Hardwood no-rinse formula Floor Cleaner onto a clean cloth and wipe onto the spot. Never apply wax treatments to your urethane-coated floor.

4. Regularly clean the floor with an appropriate floor cleaner, such as Bona Hardwood Floor Cleaning products. Always use a recommended swivel-head mop with cloth clover. Spray the floor cleaner directly onto the floor for the mop cover.

DO NOT allow excess cleaner to remain on the floors surface. Excess liquid may damage the fiber of the wood core.

Quick Fix Tips

Spills and Tracked-in Dirt

- Clean immediately.
- Apply Cleaner lightly to the surface and wipe with a sponge mop or a soft cloth.
- Excess cleaner that does not evaporate immediately should be dried with a clean towel. No rinsing is necessary.

Spots Caused by Food/Water/Animals

- Apply Cleaner to a clean soft cloth and wipe the area to remove the stain or spot.
- More stubborn spots may require additional cleaning with odorless mineral spirits, followed by cleaning with Cleaner.

Grease/Lipstick/Crayon/Ink Spots/Rubber Heel Marks

- Apply Cleaner to a clean soft cloth and wipe the area to remove the stain or spot.
- If stain remains, wipe with a cloth dampened with odorless mineral spirits and follow by cleaning the area with Cleaner.

Chewing Gum/Candle Wax

- Apply a sealed plastic bag filled with ice on top of the deposit.
- Wait until deposit becomes brittle enough to crumble off.
- After deposit has been removed, clean entire area with Cleaner.

Minor Abrasions/Scratches

- Use a wood touch-up kit, that blends with your factory stained floor color to make minor repairs.

Deep Scratches/Gouges

- Individual planks or strips that are heavily gouged or damaged may be repaired with wood touch-up kit. Major damage will require board replacement.

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