



SIMPLE FLOORS ENGINEERED HARDWOOD FLOORING INSTALLATION GUIDELINES

Please Inspect all Flooring prior to Installation

Carefully confirm that the Color, Finish, Styling and Quality Fully meet the owner's expectations. If you determine the product does not meet expectations **DO NOT INSTALL** and immediately contact your Place of Purchase. SIMPLE FLOORS Inc. will not assume any responsibility, including costs for removal or replacement, for flooring that has been installed that does not meet the owner's expectations for any reason. SIMPLE FLOORS ENGINEERED HARDWOOD FLOORING is INTENDED TO BE INSTALLED with approved full spread wood flooring adhesive, approved engineered wood flooring staplers, and NWFA approved Floating Floor methods.

Installations over Radiant Heated Sub Floors are not approved by SIMPLE FLOORS, Inc..

Light Commercial applications must be pre-approved and agreed to in writing by SIMPLE FLOORS only after an investigation of site conditions and limitations by manufacturer's engineers to determine if it is possible to install the flooring at the specific site using these methods. Contact your retailer for additional information regarding the approval of Light Commercial jobs.

PLEASE READ AND REVIEW THE ENTIRE INSTALLATION INSTRUCTIONS BEFORE PROCEEDING WITH THE ACTUAL INSTALLATION

OWNER / INSTALLER RESPONSIBILITY

Hardwood flooring is a beautiful and unique product of nature, and characterized by distinctive variations in grain and color. These natural variations in color and grain, (including filled knots, mineral streaks and scrapes), are not flaws, but are a part of the styling, natural beauty, and uniqueness of hardwood flooring. (These inherent variations should be expected and serve to enhance the natural beauty, styling, and aesthetics of the flooring) The variations may be of a manufacturing or natural type. No two hardwood floors are completely alike. **SIMPLE FLOORS Engineered Hardwood Floors** are manufactured in accordance with the accepted industry standards which allow a defect tolerance, (natural or manufacturing), of 5% of the total SIMPLE FLOORS Engineered Hardwood Flooring purchase per job. SIMPLE FLOORS will warrants 95% of the total SIMPLE FLOORS Engineered Hardwood Flooring purchase per job. The remaining 5% may be used at the owner's discretion, but is subject to the industry standard 5% defect allowance. All flooring considered defective (outside of that listed in the Warranty Exclusions on the SIMPLE FLOORS Engineered Hardwood Floor Warranty and Care sheet), after proper inspection by the installer or homeowner, should be culled, or trimmed out prior to installation and must not be installed. If an individual piece is doubtful as to grade, color, or finish, the installer should not install that piece. SIMPLE FLOORS Warranties **DO NOT** cover materials that are installed with visible defects.

If material in excess of 5% of the total job amount is found to be unacceptable, contact the place of purchase for your **SIMPLE FLOORS Engineered Hardwood Floor** immediately.

It should be realized that wood is a natural product that contains color variations, grain and characteristics, which are normal for all wood flooring products. Color changes may also occur when hardwood flooring is exposed to light sources.

The installer and home owner must assume all responsibility for full inspection of product **prior to the installation**. Open and select planks from 3 or 4 cartons in order to blend color and grain characteristics, and to allow for staggering of end joints a minimum of 7 to 10 inches. Carefully examining the flooring for color, finish, texture, and quality before installing it. Use reasonable selectivity, and use touch-up markers and putty sticks, as well as culling or cutting out pieces with visible defects. Before beginning the installation of any hardwood flooring product, the installer must determine that the environment of the job site, and the condition and type of the subfloor involved is acceptable, ensuring that it meets or exceeds all requirements specified in the **SIMPLE FLOORS Engineered Hardwood Floor** installation RECOMMENDED SUB-FLOOR TYPES and PRE-INSTALLATION JOB SITE INSPECTION sections below.

Hardwood flooring is a product of nature and is susceptible to damage when exposed to extreme changes in temperature or relative humidity. If environmental conditions and installation instructions listed below are not correctly followed, SIMPLE FLOORS Engineered Hardwood Floors may suffer irreversible damage.

SIMPLE FLOORS Inc. does not accept any responsibility for flooring failure resulting from or associated with inappropriate or improperly prepared subfloors or improper job site environmental conditions. The use of stain, wood touch up pens, filler or putty sticks for the correction of defects as well as cleaning of adhesives and residue during installation should be accepted as normal procedure. When ordering Hardwood Flooring, a waste factor between 5 - 10%, depending on layout, must be added to the actual number of square feet needed. (Diagonal Installations may require more.)

Additional Installation Notes:

- Refer to the SIMPLE FLOORS Engineered Hardwood Flooring Warranty and Floor Care document for information on warranty coverage and exclusions.
- **NOTE – SIMPLE FLOORS' Warranty for Engineered Hardwood Flooring does not warrant installation over radiant heat systems.**

TOOLS AND/OR ACCESSORIES NEEDED:

Warning: SIMPLE FLOORS, Inc. is not responsible for damage caused by user negligence related to installation practices or misuse of installation and fastening tools.

Broom	Hammer/Rubber Mallet
Pencil - Chalk Line and Chalk	Pry Bar
Tape Measure	Hardwood Flooring Cleaner
Moisture Meter(s)	Trowel (if glue down)
Safety Equipment (Goggles and Mask)	SIMPLE FLOORS Complete 3 N 1 Adhesive (if glue down)
Circular or Hand Saw; Miter or Table Saw	2-in-1 or 3-in-1, 2mm high density SIMPLE FLOORS underlayment and PVA(Poly Vinyl Acetate Cross-linking polyaliphatic emulsion) with SBR component(Synthetic Latex) Glue designed for Floating Hardwood Flooring installations (if Floating Method)
Adhesive Remover, use of mineral spirits to dampen a terry cloth will help to remove adhesive from the flooring surface (if glue down or floating)	

Recommended Installation Products

Flooring Fasteners (Staplers and Nailers)

SIMPLE FLOORS requires the use of 18 Gauge narrow crown (7/32" to 3/8") staplers and staples to properly fasten the SIMPLE FLOORS Engineered Hardwood Flooring with mechanical fasteners. Most staples have 2 legs that are treated with thermal adhesives that heat the adhesive when they are forced quickly into the floor and substrate and bond aggressively to the substrate. They also have divergent points that cause a slight curl at the end of the staple leg, making them much more difficult to loosen or remove. Staples with

crowns approximately 1/4" wide are recommended , but staples up to 3/8" crown width may be safely used when used properly. 18 gauge staple leg thickness is the recommended gauge. Staple Leg lengths of 1- 1/4" to 1-1/2" are necessary for 1/2" and thicker Engineered Floors, 1" to 1- 1/4" staple lengths are used for 3/8" Engineered Floors. Many companies produce 18 gauge staples and they usually may be interchanged in the various staple guns. It is best to use branded staples from a well known manufacturer such as Stanley-Bostich or Spot Nail. The Bostich Staplers, EHF 1838K, and SX150 BHF are 18 Gauge Staplers with adjustable Foot Adaptors that are popular and reliable. The S50351 18 Gauge staple with approx 1/4" crown, (7/32") is used with these staplers.

Many Flooring Manufacturers and Pro installers prefer the Spot Nail WS 4840 W2 stapler with the Spot Nail 4811 PN 1/4" X 1 3/8" 18 Gauge staples. Duo Fast and Senco also have staplers and staples that meet these specifications and may be used effectively.

NWFA approved Nailers and nails designed for installing Engineered Flooring may be used by qualified flooring professionals at your risk. Do not use 16 gauge or larger staples to install SIMPLE FLOORS Engineered Hardwood Flooring. Do not use staplers or nailers specifically designed for Solid Hardwood Flooring to install SIMPLE FLOORS Engineered Hardwood Flooring. SIMPLE FLOORS Inc. does not warrant flooring and accepts no liability when fasteners that are mis-used, or not designed for Engineered Flooring, are used to install SIMPLE FLOORS Engineered Hardwood Flooring.

Flooring Adhesives

SIMPLE FLOORS requires the use of a full-spread hardwood flooring adhesive to install the SIMPLE FLOORS Engineered Hardwood Flooring. SIMPLE FLOORS Inc. strongly recommends the use SIMPLE FLOORS 3 N 1 Engineered Flooring Adhesive that is an anhydrous Engineered Hardwood Flooring Adhesive, containing no water. Adhesives that are Latex, or Acrylic Latex Based contain water and should only be used by experienced professionals.

Regarding glue down installation on concrete floors:

Engineered Hardwood floors can cup or buckle when exposed to excessive moisture. This moisture can come from one or more moisture sources: adhesive containing water that is not allowed to flash properly, (releasing excess water by prematurely placing the flooring in the wet adhesive before the proper drying period has taken place), the concrete sub-floor, damp basement walls, or the surrounding outdoor environment. A newly installed, glued engineered hardwood floor may cup or peak slightly after installation. The floor should return to normal over time (generally within a few weeks) as the moisture evaporates into the air as long as all other factors that create moisture issues are maintained within the proper range. **To address environmental moisture issues SIMPLE FLOORS provides acclimation instructions below and the SIMPLE FLOORS Engineered Hardwood Flooring must be kept climate controlled conditions with the indoor Relative Humidity within the 35-55% RH range.**

Regarding sub-floor moisture, subfloors must be within required moisture parameters (determined via NWFA approved moisture testing methods).

All concrete floors must be in condition to provide for proper adhesion. All sealers, coatings, polishes, and adhesive residue must be completely removed by mechanically abrasion, or shot blasting. Test all concrete sites to determine if the concrete is suitable for direct glue methods. Do not sweep concrete with treated floor sweeping compounds prior to glue down installations. See additional information in the Installing with Adhesive Section in the Installing the Floor Instructions.

If floating, SIMPLE FLOORS strongly recommends SIMPLE FLOORS Floating Floor Tongue and Groove Glue, a PVA(Poly Vinyl Acetate Cross-linking polyaliphatic emulsion) with SBR component(Synthetic Latex) Glue designed for Floating Hardwood Flooring installations, or glue meeting these specifications from a reputable Adhesive manufacturer such as WF Taylor 2049-16 or Franklin 2104 Tongue and Groove Glue. Glues designed for Armstrong, Mannington, Shaw, and other floating Engineered Wood Floor manufacturers meeting the above specifications may also be used.

STEP 1: Pre-Installation Jobsite Inspection

When installing engineered flooring in new construction sites, **SIMPLE FLOORS Engineered Hardwood Flooring** should be one of the last items installed. Flooring should not be delivered until the pre-installation guidelines listed below are completed. After all the guidelines are met, the flooring should acclimate at the job site at least 48 hours prior to installation. **Do not open cartons until ready to install.** Prior to installation, the building must be structurally complete and enclosed. All exterior windows and doors must be installed. Any "wet" work inside the house (masonry, drywall, and paint) must also be complete – allowing adequate drying time to eliminate unnecessary moisture content within the building. Concrete should be at least 60 days old. Permanent HVAC (heating/air conditioning) systems must be operating for at least 14 days before installation, **maintaining a constant room temperature between 60-78 degrees Fahrenheit and a relative humidity of 35-55%.** Exterior drainage – including gutters and downspouts, must be in place and drain away from the building. SIMPLE FLOORS Engineered Hardwood Floors can be installed **on, above, or below** grade, although they are not recommended for full bathroom installations. Basements and crawl spaces must be dry. Crawl spaces must be a minimum of 24" from the ground to the underside of the joists. A vapor inhibitor (6-8 mil **black** polyethylene film) must be put in crawl spaces with joints overlapped and taped. Sub-floors must be checked for moisture content using the appropriate metering device for concrete or

wood. Examples of concrete moisture meters that work very well: the Delmhorst Moisture Meter Model G and the Tramex Concrete Encounter.

Performing Moisture Tests:

WOOD SUBSTRATES:

Test the moisture of the wood sub-floor using a calibrated moisture meter approved for testing wood moisture according to the meter manufacturer. The reading should not exceed 14%, or read more than 5% different than the moisture content of the product being installed.

CONCRETE SUBSTRATES:

There are multiple ways to test for excess moisture in concrete.

- Use an approved, calibrated moisture meter such as the Delmhorst Moisture Meter Model G or the Tramex Concrete Encounter. On the Tramex Concrete Encounter Meter, moisture readings should not exceed 4.5 on the upper scale.
- Perform a Polyfilm Test. Tape down 2' x 2' polyfilm squares (a clear garbage bag or plastic drop cloth will do) in several places on the floor. Wait 24-48 hours, and then check for the appearance of condensation on the inside of the bag or plastic and for a darkening on the concrete in that area. Either occurrence signals the likely presence of excess moisture, requiring a mandatory Calcium Chloride Test. Once you have determined the moisture content and that excess moisture is indeed present, a Calcium Chloride and pH Alkalinity Test must be performed to determine moisture emissions and alkalinity from the concrete slab.
- Perform a Calcium Chloride test (these can be found in flooring retail stores or online at www.moisturetestkit.com). The maximum acceptable reading is 3 lbs. /24 hours/1000 sq. ft. for moisture emissions.
- Perform a pH Alkalinity Test (a 3% Phenolphthalein in Anhydrous alcohol solution). Chip the concrete at least ¼" deep (do not apply directly to the concrete surface) and apply several drops of the solution to the chipped area. If any color change occurs, further testing is required. Using the number method on the test, a pH reading of 6-9 on a pH scale of 1-14 is considered acceptable. If the tests results exceed this number, the concrete slab should be sealed with an appropriate sealer such as SIMPLE FLOORS Complete 3 N 1 Adhesive (which also acts as a sealer when applied with an appropriate spread rate – see "Installing With Adhesive" below), prior to installation. **SIMPLE FLOORS is not responsible for Hydrostatic, Hygrostatic, or Thermal dynamics resulting from an improper concrete slab installation.** If performing a floating installation over concrete, another option is to lay out a 6 mil Polyethylene Film or a 2 in 1 Underlayment prior to installing the floor. This will act as the moisture barrier between the concrete and the hardwood flooring.

STEP 2: Storing the Material Prior to Installation

Once the building meets the conditions in Step 1, the material can be delivered to the site. Handle and unload the flooring with care and **store within the area in which it is expected to perform**. Flooring stored on concrete floors should be elevated at least four inches to allow circulation under the cartons. Cartons **must** be stored horizontally (parallel to the ground). **Never** store them standing on end. Stack the cartons 3-4 high to insure efficient acclimation. Do not store directly upon on grade concrete or next to outside walls. Cartons should be placed as close to the center of the installation area as possible, away from exterior walls, windows, and doors. Keep out of direct sunlight and away from air vents. SIMPLE FLOORS Engineered Hardwood flooring **must** acclimate for a minimum of 48 hours prior to installation. Extra precautions requiring additional acclimation may be necessary during extreme weather conditions.

STEP 3: Approved Subfloor Types

Radiant Heat Subfloors are Not Approved By SIMPLE FLOORS Inc. and installation of SIMPLE FLOORS Engineered Hardwood Floors are not warranted over Radiant Heated Substrates.

It is the sole responsibility of the purchaser to determine that all subfloor types meet the required specifications .

Wood Panel Subfloors

(Truss/joist spacing will determine the minimum acceptable thickness.

- On truss/joist spacing of 16" on center or less, use a minimum 5/8" CDX or better grade plywood panel or 23/32" APA E1 PS 2 rated NWFA approved OSB panel .
- On truss/joist spacing of more than 16" up to 19.2" on center, use a minimum 3/4" Tongue and Groove CDX or better grade plywood panel, glued and mechanically fastened, or a minimum 3/4" APA E1 PS 2 rated NWFA approved OSB panel, glued and mechanically fastened.
- Truss/joist systems spaced over more than 19.2" up to a maximum of 24" on center require a minimum 7/8" Tongue and Groove CDX or better grade plywood panel, glued and mechanically fastened, or a minimum 7/8" APA E1 PS 2 rated NWFA approved OSB panel glued and mechanically fastened.
- **WARNING: Do not use staples or glue method to install SIMPLE FLOORS Engineered Hardwood Flooring directly over particle-board or unapproved OSB (use floating method only for installations over particle board and Unapproved OSB Substrates)**

Concrete Substrates

- Concrete subfloors on all grade levels must be tested for moisture content prior to installation of the hardwood flooring. The moisture content of the concrete subfloor must register in the approved range, according to whichever test method is used to determine the slab condition. (see performing moisture tests above). Concrete must be 60 to 90 days old with a PSI rating (3000 psi or higher) that is approved by NWFA for installations of Engineered Flooring. Concrete slabs must be totally flat– less than 3 lbs. /1000 sf. / 24 hr. moisture vapor transmission. Lightweight (Acoustic) Concrete must be solid with a PSI rating of at least 2000 psi, that has no spalling (loose patches), or friable ,(crumbling), surface areas.
- **All Concrete subfloors must be:**
- **CLEAN** - Scraped or sanded, swept, and free of wax, grease, paint, oil and other debris.
- **SMOOTH and FLAT** - Within 1/8" in a 6' span. Sand or grind high areas or fill low areas with cement-based levelling compound with no less than a 3000 psi rating.

Other Subfloors-

Test all substrates for proper adhesive bond prior to the use of GLUE DOWN METHOD and follow all recommendations provided by the adhesive manufacturer regarding determining proper Substrates, conditions and exclusions.

- Existing engineered wood floors (installed perpendicular to new floor) must be fully adhered, level, flat, and abraded to accept adhesives, if staple installation method is used, the existing engineered floor must be at least 1/2" thick and installed over a NWFA approved substrate.
- Existing solid wood floors over wood substrates must be capped with and approved Plywood or APA E1 PS 2 rated NWFA approved OSB panel . Do not install Engineered Hardwood Flooring over Solid Hardwood Flooring on concrete.
- Acoustic Concrete -must be sound, and with an approved PSI rating (2000 psi or higher)
- Cork (acoustic) -must use URETHANE WOOD FLOORING ADHESIVE Designed for use over properly prepped surfaces
- Ceramic, Terrazzo, Marble, or Slate must be fully adhered, level, flat, and prepped to accept adhesive
- Resilient Vinyl or Tile- must be fully adhered , over NWFA approved substrates, and prepared to accept adhesives.
- Do not Sand existing resilient tile, sheet vinyl, attached felt , or asphalt cutback adhesive as they may contain asbestos fibers that are not easily identifiable and are known to cause cancer.
- Metal -must be level, flat, and prepped to use only URETHANE ADHESIVES that are designed for use over METAL SUBSTRATES.

STEP 4: Preparing the Sub-floor

For wood panel subfloors:

- Ensure that there is proper expansion space (1/8") between the panels. If the panels are not tongue and grooved, and if there is not sufficient expansion space, use a circular saw to create the necessary space. Do not saw through tongue and groove joints on T&G subfloors.
- Ensure they are structurally sound: Replace any water-damaged, swollen or delaminated sub-flooring or underlayment that is unable to properly hold fasteners. When possible, plywood sheets should be laid with grained outer plies at right angles to joists; adjacent rows staggered four feet and nailed every 6" along each joist with 7d or larger nails. When installing directly over old wood or strip floor, sand any high spots, re-nail old floor to eliminate squeaks or loose boards, and install new planks at right angle (perpendicular) to the old floor, or overlay old floor with 1/4" plywood underlayment. Leave a 1/8" gap at the edges and nail with 7d or larger nails every 6" at the edges and every 12" in both directions and through the interior of each sheet of plywood. It is normal for mechanically (staple/nail/cleat) fastened floors to make minor occasional noises such as popping, squeaking, or crackling which can change as environmental changes occur. **Noise from subfloors is not considered a manufacturing related issue and is not warranted by SIMPLE FLOORS Inc.** You can help reduce popping, squeaking, or crackling by being sure that the subfloor is secured properly (as explained above) and is structurally sound, that there is no loose joists or decking, and is swept very thoroughly prior to installation.

All Sub-floors must be:

- CLEAN: scraped, sanded, or swept; free of wax, grease, paint, oil, and other debris.
- SMOOTH/FLAT: within 3/16" over 10' and/or 1/8" over 6'. Sand high areas or joints. Fill low areas (no more than 1/8") with a cement type filler.
- DRY: Moisture content of sub-floor must not exceed 12% prior to installation of wood flooring. All moisture testing must be done before wood has been acclimated for a minimum of 72 hours and job-site requirements met.
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- **CAUTION: WOOD DUST**

The International Agency for Research on Cancer has classified wood dust as a nasal carcinogen as well as an eye and skin irritant.

In case of irritation, flush eyes or skin with water for at least 15 minutes. In case of severe irritation; seek immediate medical attention.

- **ATTENTION CALIFORNIA INSTALLERS AND CONSUMERS WARNING !**

Installation of this product may create wood dust which is known to the State of California to cause Cancer.

Sawing, sanding, and/or machining of wood products can produce wood dust that can cause respiratory, eye, and skin irritations. Equipment should be equipped with a dust collector to reduce airborne wood dust. Wear an appropriate NIOSH designated dust mask to reduce exposure to airborne wood dust. Avoid wood dust contact with eyes.

STEP 5: Installing the Floor

- Open several different cartons and mix the pieces to maximize the color and shade variations.
- Install the product parallel to the longest wall to provide the most appealing visual effect.
- Stagger the ends of the boards at least 10" in adjacent rows to insure a random visual effect.
- Allow for a 1/2" minimum expansion gap around all fixed vertical objects that reach the substrate. Engineered Wood as well as the housing structure expands and contracts with changes in humidity. Wood will buckle and break loose if an adequate expansion space is not provided. **ALWAYS** provide for expansion space when fitting flooring adjacent to vertical objects (i.e. walls, baseboards, door frames and facings, pipes, etc.).

DOORWAY/WALL PREPARATION:

- Undercut all door casings, including all door frames, and all fixed vertical structures, 1/16" higher than the thickness of the floor being installed where quarter round or surface trim cannot be used.
- Remove existing base and shoe molding on wall as well as doorway thresholds. Trim may be reapplied after the installation is complete.

PREPARING THE INSTALLATION:

1. Before starting, measure the width of the room, and divide the room's width by the width of the plank. If this means that the last row of planks will be narrower than 2", you will need to cut the first and last row of planks to be installed in such a way that both rows of planks will have the same approximate width for an overall continuous look. To cut the boards, always saw with the saw teeth rotating or cutting down into the face or top of the board. Cutting from the top down helps protect the surface from excess chipping . Use a carbide tip blade to ensure smooth cuts.

2. Always install SIMPLE FLOORS Engineered Hardwood Flooring with the groove side of the plank facing the wall, and with the installer positioned off the floor when possible.

Begin the installation at the corner of the room so that the groove side can be placed against the starting wall. Be sure to leave an expansion gap of approximately 1/2" using 1/2" spacers. If the starting wall is not straight, it may be necessary to scribe the first row to match the wall, allowing the opposite side of the row to present a true square base for the rest of the floor. Once the installation of the first row is complete, there will be an extra piece from the last plank which, if long enough, may be used to begin the next row. To locate the best starting point, an exterior wall is usually the straightest and best reference line to start the installation from. If possible, the direction of the flooring being installed should be at right angles to the floor joists. Establish a starting line by leaving a minimum 1/2" expansion gap around all vertical obstructions. In at **LEAST 2** places, measure out equal distances from the starting wall equal to the width of the starting plank calculated earlier in this section regarding the room width and plank width. Allow for all doors and openings as well as the 1/2" expansion space needed at all fixed vertical structures. Mark these points and snap a working chalk line parallel to the starting wall allowing the required expansion space between the starting wall and the edge of the first row of flooring. Plan the floor layout (width-wise) so you don't have to rip (which is cutting the board lengthwise to make it narrower) the last row **NARROWER** than 2". You may have to rip the **FIRST** row to ensure that the **LAST** row is at **LEAST 2"** wide.. **When installing a floor that is more than 40 feet in length, an expansion joint is required. The most effective way of providing the required expansion joint is to install T-Molding in that area.**

INSTALLING THE FIRST ROWS:

- Establish your starting row (SEE ESTABLISH A STARTING POINT ABOVE).
- Install a temporary starter boards along the edge of the working line (using straight 2 by 4's or scrap wood flooring ,and temporarily secure them to the sub-floor), and begin installation. This will hold the first several rows in place as you begin installation to prevent the first rows from shifting as you add adjacent rows.
- Make sure to use the straightest, longest boards available when installing the first two rows.
- **REMINDER:** Take boards from 5 to 7 boxes while installing. Do not install 2 pieces from the same box side by side or in the same row – rack or mix the colors and shades while installing to achieve the proper visual effect. Stagger the end-joints of adjacent rows at least 10" to add structural stability and create a more appealing look for the floor.
- Line up the edge of the first row against the temporary starter board. Install **SIMPLE FLOORS Engineered Hardwood Flooring** with the groove side of the plank facing the wall with the installer positioned off the floor when possible. The tongue of the boards should always be facing the installer except where special circumstances exist.
- Make sure the end-joints of adjacent rows are staggered at least 10" across 4 to 6 rows to establish a random visual and avoid identifiable patterns forming in the installation, (stair-step appearance).

• **INSTALLING THE REST OF THE FLOOR:**

- Make sure to use the straightest, longest boards available when installing the first two rows.

- **Continue to take boards from 5 to 7 boxes while installing. Do not install 2 pieces from the same box in a row – mix the colors and shades while installing to get a more favorable overall look.**
- Stagger the end-joints of adjacent rows at least 10” to add structural stability and create a more appealing look for the floor.
- When installing individual pieces, connect the end-joints first as close to the long tongue and groove as possible. Then slide (push) the long tongue and groove together as tightly as possible. You may need to use a scrap piece of the same flooring product as a tapping block to help align the product, use caution and tap only into the tongue, never the finished edge of the flooring.
- Double check the edges and ends of your installed planks – all joints should fit tightly together.
- Continue with this method while installing the rest of the floor. In some cases, it may be necessary to cut the flooring lengthwise in the last row. In order to do so, place the last board over the next-to-last row (Refer to Preparing the Installation), marking the exact cut and taking into account the 1/2” gap with regard to the expansion space.
- Once the flooring installation is complete, proceed to install the base boards and trim profiles, which will cover the expansion gap without obstructing it. Fasten all trim into wall base. Do not nail or staple trim into or through the flooring surface.

Special Circumstances

- **Doorways:** Attempting to continue installing rows through a doorway into another room can be difficult because the narrow opening is a very small base upon which to continue consistent, even rows into the next room. To correctly align plank rows from room to room, it is best to use a master reference line that runs through the doorway to the far ends of each room involved. Position the line so that it is perpendicular from the corresponding wall and parallel to the side walls. Use this line to align the plank rows from room to room.
- **Pipes, vents and other fixed objects:** Each instance of these items can be unique, but the general rule is to measure very carefully before you cut and remember to leave a 1/2” expansion gap between the object and the flooring. You will cover the expansion gaps with molding, vent covers or pipe rings when the floor is complete.
- **Installation on Stairs:** Working from the top step down, flooring and nosings should be installed using a premium grade wood flooring adhesive and screw type fasteners or nails for all trim pieces. All stair nose moldings must be glued and nailed / screwed every 6”, as a safety precaution.

INSTALLING WITH ADHESIVE: Use only approved adhesives. SIMPLE FLOORS, Inc. recommends SIMPLE FLOORS Complete 3N1 Adhesive. Refer to and follow the Adhesive Manufacturer's instructions on the pail prior to installing SIMPLE FLOORS Engineered Hardwood Flooring. When adhesives other than SIMPLE FLOORS 3N1 Engineered Flooring Adhesive, the adhesive performance liability is transferred to the Adhesive Manufacturer. SIMPLE FLOORS Inc. does not warrant, or accept any liability regarding adhesive performance or failure when SIMPLE FLOORS Complete 3N1 Adhesive is not used. Contact SIMPLE FLOORS INC., or the Adhesive Manufacturer, when you experience problems, or if you have additional concerns.

Follow all guidelines outlined earlier regarding pre installation and the general installation process.

- SIMPLE FLOORS requires the use of a full-spread hardwood flooring adhesive to install the SIMPLE FLOORS Engineered Hardwood Flooring. SIMPLE FLOORS Inc. recommends the use SIMPLE FLOORS 3 N 1 Engineered Flooring Adhesive that is an anhydrous Engineered Hardwood Flooring Adhesive, containing no water. Adhesives must be approved for use and designed specifically to install Engineered Hardwood Flooring. Engineered Hardwood Flooring Adhesives that are Latex Based, or Acrylic Latex Based, contain water and should only be used by experienced professionals. Follow all Adhesive Manufacturer's instructions for use listed on the adhesive container.
- Make sure to use the appropriate trowel to get the correct coverage rate with the adhesive. Use a V-Notch trowel with the dimensions- 3/16” x ¼” x ½” Flat V, when using SIMPLE FLOORS Complete 3 N 1 Adhesive. This trowel allows for the correct amount of adhesive as well as the correct ridge depth and spacing to properly install the SIMPLE FLOORS Engineered Hardwood Flooring. Coverage will be about 60 – 70 sf/gallon when used as recommended. Hold the trowel at a 90 degree angle firmly against the sub-floor and spread equal amounts of adhesive in an area that can be covered while the adhesive

remains wet enough to transfer to the flooring properly. Actual working time with the adhesive varies depending on the humidity levels, and environmental conditions at the installation site. Do not attempt to install flooring over adhesive that has cured to a dry film and cannot transfer to the flooring planks properly.

- SIMPLE FLOORS Complete 3N1 Adhesive can also be used as a general concrete sealer (MVT up to 12 lbs.) and flooring adhesive combined. The spread rate for this method is approximately 30 – 35 sf/gallon using a Complete 3N1 3/16" x 1/4" x 1/2" Flat V Glide-On Trowel. Hold the trowel at a 45 degree angle firmly against the sub-floor, and spread equal amounts of adhesive in an area that can be covered in approximately 60 minutes. Do not use trowels after the Glide-On spacer tips have been worn excessively.
- Apply Adhesive to the substrate using a trowel motion perpendicular to the board length, or a half moon shaped spreading motion, avoid pulling adhesive parallel to the board length when possible. Do not spread your adhesive too far ahead of your work area. If the adhesive skims over and starts to dry, this will prevent a proper bond between the substrate and the Engineered Hardwood flooring, immediately remove the old adhesive and spread new adhesive. You must have adequate adhesive transfer to ensure the floor will be installed correctly. You can double check the holding strength of the adhesive by occasionally lifting a board and checking the transfer of the adhesive.
- Do not stand on the recently installed floor while the adhesive is still drying. This can cause the boards to shift, leaving unwanted gaps between planks and can result in installation issues further into your install. Always work off the floor facing the flooring tongues during installation. Try to avoid sliding the pieces through the adhesive as much as possible – this will help reduce memory pull-back (boards pulling apart once they are in position) and adhesive bleed-through (excess adhesive squeezing out vertically through the joints).
- Once the boards are tightly fitted together, the use of 3M 2080 Blue Painter's Tape may be used if necessary to hold the planks together while the adhesive cures. Make sure to clean any adhesive off of the surface of the wood with mineral spirits BEFORE you apply the tape! If the adhesive dries on the surface of the wood it is VERY difficult to remove. 24 hours after the installation is complete, remove all of the Blue Painter's Tape from the surface of the flooring. NOTE: Use only 3M 2080 Blue Painters Tape. Do not use Masking or Duct Tape! These tapes leave residue on the surface of the wood which is very difficult to remove and may permanently damage the flooring finish.
- Do not apply the adhesive if the room temperature or sub-floor is colder than 65 degrees Fahrenheit.
- **NOTE:** Adhesives are difficult to remove from the surface of the hardwood flooring after installation. Make sure to have Adhesive Remover/Stripper or Mineral Spirits and a Terry Cloth readily available to remove excess adhesive immediately.
- Check to make sure no adhesive residue is left to dry on the flooring surface during the installation process.

INSTALLING WITH STAPLES/Nails/Cleats (Mechanical Fasteners):

Follow all guidelines outlined earlier regarding pre installation and the general installation process.

SIMPLE FLOORS INC. recommends the use of 18 Gauge narrow crown (7/32" to 3/8") staplers and staples with the proper leg length to properly fasten the SIMPLE FLOORS Engineered Hardwood Flooring. NWFA approved Nailers and nails designed for securing Engineered Flooring may be used by qualified flooring professionals at your own risk. Do not use 16 gauge or larger staples to install SIMPLE FLOORS Engineered Hardwood Flooring. Do not use staplers or nailers specifically designed for Solid Hardwood Flooring to install SIMPLE FLOORS Engineered Hardwood Flooring. SIMPLE FLOORS Inc. does not warrant flooring installations, and accepts no liability problems that may arise, including but not limited to loose flooring, dimpling or distortion of the face, breakage of the core or tongue, and noise when fasteners that are mis-used, and are not approved or designed for Engineered Flooring, are used to install SIMPLE FLOORS Engineered Hardwood Flooring.

- Use only Stapling and Nailing Equipment and Fasteners designed for Engineered Hardwood Flooring Planks over NWFA approved APA Stamped E1- PS2 Underlayment Grade Subfloors.
- Staples and Nails should be of sufficient length to allow a minimum of 3/4" of the fastener to penetrate and hold into the subfloor. The Staples or Nails should be placed in the top of the tongue, about 2 inches from each end, and spaced along the length of the board every 6" to 8".
- Follow all instructions provided by the Manufacturer of the specific fastening equipment.
- Make certain the Fastener's air pressure is set, and guide angle and depth settings on the adapter foot are correct in order to allow the staple crown or nail head to recess the fastener flush in the top of the flooring tongue (not protruding above or recessed below) the tongue so no damage or breakage of the core or tongue occurs. Occasional noise is inherently

common to staple and nailed installations and is not considered a manufacturing defect. Inherent noise may be minimized by maintaining recommended indoor climate control.

- **WARNING: Do not use mechanical fasteners or glue method to install SIMPLE FLOORS Engineered Hardwood Flooring directly over particle-board or unapproved OSB (use floating method only for installations over particle board and Unapproved OSB Substrates)**
- **When using Mechanical Fasteners:** Using improper adapters and pressure settings can cause severe damage to the flooring while using the staple/nail/cleat installation method. Using the correct adapter and pressure will set the staple/nail/cleat correctly in the tongue. It is vital that the tool is adjusted properly so the staples/nails/cleats are being positioned at the proper angle. Air pressures set too high can cause damage to the tongue, putting blisters on the face (dimpling) of the flooring and making it difficult to install adjoining boards. Air pressure necessary to attach fasteners properly (PSI) on the compressor is usually around 80 PSI. A proper test is to set the Stapler/Nailer pressure initially at 70 PSI and adjust it until the staple/nail/cleat properly sets in the tongue. Test the stapler or nailer on a scrap piece of material first. If the tongue is being damaged when stapling/nailing, or the staple/nail/cleat is driving too deeply into the nail channel, lower the pressure. If the staples/nails/cleats do not set deep enough, raise the pressure. SIMPLE FLOORS is not responsible for damage caused by mechanical fasteners. If you need to remove a staple/nail/cleat that has gone in crooked, do not pull straight up from the tongue. This will damage the surface of the board. Instead, pull out the staple/nail/cleat from the tongue at the front of the board with all pressure from the hammer's head directed to a fulcrum board on the sub-floor. SIMPLE FLOORS is not responsible for damage caused by negligent installation practices, the misuse of Mechanical Fasteners, hammers or other installation tools.

INSTALLING WITH FLOATING METHOD:

Follow all guidelines outlined earlier regarding pre installation and the general installation process.

Underlayments:

- Use SIMPLE FLOORS 2-in-1, or 3-in-1, 2mm High Density closed cell foam (polyethylene, polypropylene, or EVA) underlayment with attached polyethylene film or foil moisture barrier, overlap lip, and tape(2-in-1), or compatible industry approved underlayment. Do not use styrene bead, or open cell poly type(packaging wrap type) underlayment. If the flooring has underlayment attached, or does not have a moisture barrier attached, prior to installing the underlayment, cover all substrates with a 6mil polyethylene sheet, and seal all seams. Lap the moisture barrier 1/2" up all walls to allow moisture vapor to escape from underneath the flooring as necessary.
- Underlayments must have adequate densities and must not be capable of permanent compression in order to prevent deflection at the flooring joint, allowing the flooring boards to remain level under traffic at all times throughout the life of the flooring .
- When sealing seams, Seal all underlayment or polyethylene film moisture barrier seams with a high quality, wide, waterproof packaging tape that adheres permanently and will not tear. Lap underlayment 1/2" up all walls to allow moisture vapor to escape from underneath the flooring as necessary.

Floating Floor Glue:

- Use SIMPLE FLOORS Floating Floor Glue, a PVA(Poly Vinyl Acetate Cross-linking polyaliphatic emulsion) with SBR component(Synthetic Latex) Glue designed for Floating Hardwood Flooring installations, or glue meeting these specifications from a reputable Adhesive manufacturer such as WF Taylor 2049-16 or Franklin 2104 Tongue and Groove Glue. Glues designed for Armstrong, Mannington, Shaw, and other floating Engineered Wood Floor manufacturers meeting the above specifications may also be used.
- Never use a glue that does not contain the SBR (Synthetic Latex) component such as Titebond II, Elmers Glue All, Gorilla Glue, or Elmers Carpenters Wood Glue. Even though they may appear to be similar, these glues dry hard and brittle and will cause excessive noise and compromised joints throughout the life of the floor. SIMPLE FLOORS Engineered Hardwood Floors will not be warranted if unapproved glues, not specifically designed for floating hardwood installations are used.
- When gluing, run a continuous bead on the tongue of the end and full length of the board with the tongue facing the installer and the groove facing the opposing wall. Fit the boards tightly as secure in place making sure that the hydraulic action of the glue, or movement from fitting does not loosen or cause separation of the tight fit. 3M 2080 Blue Painter's Tape (only) may be used to keep the flooring joints together during the installation process.
- Do not allow glue to remain on the flooring surface after fitting. Wipe off all glue and residue immediately throughout the installation process.

- Do not stand on the recently installed floor while the adhesive is still drying. This can cause the boards to shift, leaving unwanted gaps between planks and can result in installation issues further into your install. Always work off the floor facing the flooring tongues during installation.
- Floating Floor Tongue and Groove Glue is not freeze-thaw stable. Do not use glue that has been exposed to freezing temperatures.
- Once the boards are tightly fitted together, the use of 3M 2080 Blue Painter's Tape may be used if necessary to hold the planks together while the adhesive cures. Use only 3M2080 Blue Painter's Tape and remove within 12 to 24 hours. Use of other types of tape, or 3M2080 tape left for more than 24 hours, may permanently damage the flooring finish. Make sure to clean any adhesive off of the surface of the wood with mineral spirits BEFORE you apply the tape! If the adhesive dries on the surface of the wood it is VERY difficult to remove. 24 hours after the installation is complete, remove all of the Blue Painter's Tape from the surface of the flooring. NOTE: Use only 3M 2080 Blue PaintersTape. Do not use Masking or Duct Tape! These tapes leave residue on the surface of the wood which is very difficult to remove and may permanently damage the flooring finish.

GENERAL TIPS: FLOOR REPAIR

- 1. Minor damage to your hardwood floor may be repaired by using a color fill putty stick or felt stain marker. This special product should be matched to the color of your floor and, when properly used, will make the damaged area virtually invisible.
- 2. A qualified hardwood flooring installer should repair extensive damage to traditional engineered hardwood flooring.
- 3. For splinters and loose edges, broken away or still attached, DO NOT PULL, carefully glue in place with clear CA Cyanacrylate (Super Glue), carefully trim small sprigs or raised edges with a chisel point razor and touch up with a matching color pen or putty stick available at most home centers.
- 4. Contact **your retailer** for information regarding locating matching Trim Pieces, board replacements, cleaning and maintenance, touch-up and minor repair, or other assistance.

HARDWOOD FLOORING CARE & MAINTENANCE

SIMPLE FLOORS Inc. does not warrant floors that are not properly maintained.

Routine Maintenance

1. Use a damp cloth to blot up spills as soon as they happen. Never allow liquids to stand on your floor.
2. For tough spots, such as oil, paint, markers, lipstick, ink, tar, or incidental topical residue from manufacturing processes, use Mineral Spirits, Denatured Alcohol (Clear Hand Sanitizer containing Ethanol) on a clean white cloth, then wipe the area with a damp cloth to remove any remaining residue. IMPORTANT! Never use Lacquer Thinner, or Citrus Based Solvents to Clean SIMPLE FLOORS Engineered Hardwood Flooring. Test all cleaning chemicals on an inconspicuous area or loose piece of the flooring before use.
3. Sweep, dust, or vacuum the floor regularly with a proper hard surface non motorized attachment (not the beater bar) or microfiber dusting pad (such as available in the Bona floor care kit), to prevent accumulation of dirt and grit that can scratch or dull the floor finish. **Do not Use Swiffer type dust mops, Steam Cleaning Equipment** or Swiffer Type steam or wet mops of any kind on the hardwood flooring surface.
4. Periodically clean the floor with **SIMPLE FLOORS Engineered Hardwood Floor** approved cleaning products, or a Bona Hardwood Floor Cleaner Kit, made specifically for prefinished hardwood floor care. apply cleaning liquid to dampen (not dripping), a soft clean cloth or terry cloth mop cap. Dry the floor immediately after cleaning with a dry terry cloth towel to remove excess cleaner residue and avoid streaking.
5. Do not apply liquid cleaners directly to the flooring surface, never wash or wet mop the floor with soap, water, oil-soaps, detergents, vinegar, or any other liquid cleaning material. This can cause swelling, warping, delamination, or joint-line separation, and will void the warranty.
6. Do not use steel wool, abrasive cleaners, or strong ammoniated or chlorinated type cleaners.
7. Do not use any type of finish restorer, coatings to enhance shine, floor wax, or polishes.
8. For spots such as candle wax or chewing gum, harden the spot with ice in a plastic bag, immediately dry, and then gently scrape with a plastic scraper, such as a credit card. Be careful not to scratch the flooring surface. Wipe clean with a damp cloth.
9. For tough stains, you may need to use a heavy-duty stain remover made specifically for hardwood floors.
10. A more frequent dust-mopping or vacuuming schedule may be required in very sandy areas such as a beach home.
11. Maintain a 35-55% air humidity and 60-78°F temperature at all times within the room.

On Site Protection

1. Entry mats will help collect the dirt, sand, grit, and other substances such as oil, asphalt, or driveway sealer that might otherwise be tracked onto your floor.
2. When placing a rug, do not use rubber or foam backed plastic mats directly on the flooring as they may discolor the flooring finish. To prevent slippage, use an approved vinyl rug underlayment.

3. Use 1" minimum diameter felt floor protectors. As a rule, the heavier the object, the wider the floor protector. Proper Floor Protectors" on feet of all furniture is defined as any soft, cushioned product that will cover the feet/posts entirely. Metal or Plastic gliders, cardboard, or any other hard surface or pads too small for the feet are not considered "proper floor protectors".
4. Maintain a normal indoor relative humidity level between 35 and 55% throughout the year to minimize the natural expansion and contraction of the wood.
 - a. Heating season (Dry): A humidifier is recommended to prevent excess shrinkage due to low humidity levels. Wood stoves and/or electric heat tend to create very dry conditions.
 - b. Non Heating Season (Wet): An air conditioner, dehumidifier, or periodically turning on your heating will help to maintain humidity levels during summer months.
5. Avoid excessive exposure to water during periods of inclement weather.
6. Do not walk on your floor with stiletto heels, spiked golf shoes, or other types of sports cleats.
7. Do not allow sharp, pointed, or rough textured objects to be exposed to the hardwood flooring.
8. Keep your pet's nails trimmed to prevent them from scratching your floor.
9. Periodically rearranging your area rugs and furniture will allow the floor's finish to age evenly and the color to remain uniform. UV sunlight will change the color of hardwood to varying degrees based on exposure and species type.
10. Use a dolly when moving heavy furniture or appliances; but first, put down a piece of quarter inch plywood or Masonite to protect the floor. Never use Cardboard to protect the floor when moving or rolling heavy objects. Never try to slide or roll heavy objects across the floor.
11. A hard, smooth bottomed protective mat designed for Hardwood Flooring should be used for furniture or chairs with casters.

GENERAL TIPS: HARDWOOD MAINTENANCE AND ANNUAL SEASONS

Wood floors will be slightly affected by varying levels of humidity within your building. To make sure the floors are protected for as long as possible, it is necessary to keep the relative humidity levels between 35% - 55%. Below are some recommendations on how to achieve proper indoor environment conditions throughout the year.

- Wet/Humid Seasons(Wood may expand): Heaters are not generally used during these months. Therefore the floor holds in the humidity and expands. To maintain a proper humidity level, the use a dehumidifier or air conditioner may be required.
- Dry Seasons(Wood may contract or shrink): Wood-burning stoves, gas and electric heating systems, and forced air heating systems are used often during winter months – creating very dry conditions indoors. Low indoor relative humidity causes the wood lose moisture and subsequently contract and change shape, (cupping), resulting in gaps, misshapen boards, and permanent damage from cracking of the flooring surface, delaminating of the core. The use a humidifier to keep the humidity level between 35% - 55% may be required. In Winter months, Forced air Heat Systems are capable of removing 15 gallons or more of water from indoor air per day in 1000 square feet of heated space.
- **Other Installation Methods and Warranty Information**
- You may obtain the "SIMPLE FLOORS Engineered Hardwood Flooring Warranties and Floor Care Guide" documents as well as the installation instructions for all approved installation methods at our website www.simplefloors.com.