



CANADIAN STANDARD ENGINEERED T&G FLOORING INSTALLATION INSTRUCTIONS

IMPORTANT – PLEASE READ CAREFULLY

Pre-installation Warranty

Product Variance from Sample

No claim will be accepted for installed material due to sample and product color differences.

For claims purposes, YOU ARE ALLOWED TO OPEN UP TO 2 BOXES FOR PRODUCT INSPECTION. DO NOT OPEN ALL THE BOXES.

Due to the natural characteristics of hardwood, there will be some variance in wood tones. Samples exposed to excessive light will have aged and could differ from the current product. This is not a manufacturing defect. Any material returned for deviation from sample color must be in new, unopened cartons (one carton may be opened for comparison but must be properly repackaged). Handcrafted products will have variations in scraping and/or texturing, which are not considered defects. A restocking fee will apply if material is within manufacturer's color specifications.

Before You Begin

Engineered T&G floors can be installed over most properly prepared subfloors and are designed for dimensional stability, making them suitable for installation on all grade levels, provided that excessive moisture conditions are not present. We are committed to continuous technological advancements that enhance product performance and improve installation techniques. To ensure you have the most up-to-date installation instructions, please visit our website at canadianstandardflooring.com.

Caution: Wood Dust

Cutting, sanding, or machining wood products generates wood dust. While wood products are not classified as hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200), the International Agency for Research on Cancer (IARC) and the State of California have identified wood dust as a potential human carcinogen.

Precautionary Measures:

Airborne wood dust can lead to respiratory, skin, and eye irritation. It is essential to equip power tools with dust collectors and use an appropriate NIOSH-designated dust mask. Avoid contact with skin and eyes.

First Aid Measures for Irritations:



Eye Irritation: Flush eyes with water. Seek medical attention if needed.

Dermatitis: Consult a medical professional if symptoms occur.

For Safety Data Sheets, please visit canadianstandardflooring.com.

Warnings:

WARNING: Drilling, sawing, sanding, or machining wood products can expose you to wood dust, which is known to the State of California to cause cancer. To minimize risk, avoid inhaling wood dust, and utilize a dust mask or other protective measures.

For more information, visit www.P65Warnings.ca.gov/wood.

WARNING! DO NOT MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC “CUTBACK” ADHESIVES, OR OTHER ADHESIVES. Previously installed resilient floor coverings and the asphaltic or cutback adhesives used may contain asbestos fibers and/or crystalline silica. These products DO NOT contain asbestos or crystalline silica, but take precautions to avoid creating dust. Inhalation of asbestos or crystalline dust poses a cancer and respiratory tract hazard. Smoking increases the risk of serious harm for those exposed to asbestos fibers. Unless you are absolutely certain the product is non-asbestos-containing, you must presume it contains asbestos. Regulations may require testing to determine asbestos content and may govern the removal and disposal of such materials. Refer to the current edition of the Resilient Floor Covering Institute (RFCI) publication, Recommended Work Practices for Removal of Resilient Floor Coverings, for detailed removal instructions.

These building materials emit formaldehyde, which can cause irritation of the eyes, nose, and throat, as well as headaches, nausea, and various asthma-like symptoms, including shortness of breath. Individuals at greater risk include the elderly, young children, and those with a history of asthma, allergies, or lung problems. Ongoing research is examining the potential long-term effects of formaldehyde exposure. Reduced ventilation can lead to the accumulation of formaldehyde and other contaminants in indoor air. High indoor temperatures and humidity can elevate formaldehyde levels. If your home is located in an area prone to extreme summer temperatures, consider using an air conditioning system to maintain indoor temperature levels. Other controlled mechanical ventilation methods can help reduce formaldehyde and other indoor air contaminants. For inquiries about the health effects of formaldehyde, consult your physician or contact your local health department.

Installer/Owner Responsibility

Responsibilities of the Installer/Owner: It is the responsibility of the installer and owner to ensure that job site environmental conditions, as well as subfloor and subsurface conditions, meet or exceed all requirements outlined in the installation instructions prior to installation. The manufacturer disclaims all responsibility for product performance or installation failure resulting from deficiencies in the subfloor, substrate, environmental conditions, or job site circumstances.

Moisture Management: All wood products will expand and contract until they reach moisture equilibrium with the environment in which they are installed. To minimize this expansion and contraction, it is essential to maintain consistent interior relative humidity year-round. Humidification and/or dehumidification systems will be necessary to achieve the prescribed humidity levels.



Quality Inspection: The owner and installer assume full responsibility for the final inspection of product quality. Examine the flooring for color, finish, and style prior to installation. If any material is deemed unacceptable, contact the seller immediately. Wood is a natural product and will exhibit characteristics such as variations in color, tone, and grain. Flooring is manufactured according to industry standards, allowing for manufacturing and natural tolerances of up to 5% of the total installation.

Installation Guidelines:

- The installer should work with a minimum of three cartons at a time to ensure a good blend of color and shade.
- Reasonable selectivity is required; set aside or discard any pieces with visible defects. Do not install undesirable pieces. Flooring warranties do not cover materials with visible defects once installed; therefore, installation signifies acceptance of product quality.
- Check carton labels for lot numbers and avoid mixing lot numbers.

Preparation Requirements: All work involving water or moisture (such as plumbing, masonry, painting, and plastering) must be completed before the flooring is delivered. The building envelope should be finished, with exterior doors and windows installed. Exterior grading and gutter downspouts must also be in place, and permanent HVAC systems should be operational.

Protection During Installation: Take precautions to protect the flooring from other trades. Do not cover floors with plastic, red rosin paper, felt, wax paper, or previously used cardboard. Instead, use breathable materials such as clean, dry, plain, uncoated cardboard or construction paper. Be aware that inks from printed cardboard could damage hardwood floors. Thoroughly clean the floor before covering to remove any grit and debris that could harm the finish. Complete coverage is essential to prevent uneven ambering from UV exposure, but do not leave flooring covered for extended periods, as reduced air exchange can create a greenhouse effect and damage the flooring.

HVAC and Environmental Conditions: Permanent HVAC systems must be operational for at least five days prior to delivery and maintained between 65°F and 75°F (18°C–24°C) with a relative humidity of 35% to 55% during and after flooring installation for the life of the product. If HVAC cannot be utilized during installation, environmental conditions should be close to normal living conditions, ideally between 60°F and 80°F (16°C–27°C) and at the area's average yearly humidity.

Humidity Considerations: Building interiors experience two distinct humidity seasons—heating and non-heating. It is vital to maintain humidity levels between 35% and 55% throughout the year.

- **Heating Season:** During the heating season, low humidity and dry conditions are common. Humidifiers are recommended to prevent excessive shrinkage or permanent gaps in wood floors caused by seasonal low humidity.
- **Non-Heating Season and Coastal Areas:** In the non-heating season or in high-humidity areas, proper humidity levels should be maintained using air conditioning or dehumidifiers.

Manufacturer warranties do not cover natural expansion and contraction resulting in separation between planks or damage from excessively low or high humidity. Seasonal gapping is not considered a manufacturing defect.

Material Purchase and Storage: Purchase an additional 5% of flooring to account for cuts, and 10% if installing diagonally. Any excess material should be left with the homeowner.



Warranty Note: The installer should provide the owner with one carton end label from the installed product along with pre-installation moisture content readings for warranty purposes. The owner should retain the carton end label and a copy of the invoice, including the product style name and number. It is recommended that the owner store any excess flooring in a climate-controlled area for potential future repairs.

Installation Practices: Using stain, filler, or putty for corrections is considered normal practice and a routine part of installation, as well as for touch-ups throughout the life of the product.

Basic Tools Needed

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| • Safety glasses | • Thick felt protectors | • Utility knife | • Carpenter's square |
| • Jamb saw | • Putty knife | • Low-adhesion painter's tape | • NIOSH-approved dust mask |
| • Wood pin moisture meter | • Broom or vacuum | • Plastic scraper | • 75 lb smooth roller |
| • Table saw Concrete in-situ | • Starting row wedges | • Clean white cloths or towels | |
| • Appropriate moisture meter adhesive trowel | • Pry bar or trim puller | • Pull bar | |
| • Chalk line | • Pencil | | |
| • Coordinating stain | • Miter saw | | |
| • Tape measure | | | |
| • Mineral spirits (odorless) | | | |
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Pre-installation and Job Site Conditions

Do not install wood flooring until appropriate temperature and humidity conditions have been achieved. Flooring should be delivered and stored inside the HVAC, controlled portion of the job site. Flooring should be stacked with at least a 4-inch airspace under the cartons. Remove any and all plastic wrap that may have been used to ship the material. Make certain that the room temperature is set to normal living conditions as described above.

All Canadian Standard Wood Floors must be acclimated a minimum of at least 72 hours before installation of the flooring and after the HVAC, windows and building envelope has been completed and is in operation. The purpose of acclimation is to allow the moisture content of the wood to adjust to "normal living conditions" at the site; these are the temperature and humidity conditions that will typically be experienced once the structure is occupied.

To reduce the risk of moisture-related failures, the subfloor and wood flooring must be of similar moisture content. Test the subfloor by taking a minimum of 20 moisture content readings per 1,000 square feet of subfloor using a pin-type moisture meter. Average these readings and include on the data sheet on Page 15 of these instructions. Likewise check the wood flooring moisture content and record on the same sheet. These moisture readings are to be left as a permanent record of testing with the homeowner. When both the subfloor and flooring are below 12% moisture content and the flooring is within 4% of the subfloor moisture, the product can be installed. A moisture test is strongly recommended to determine if high moisture exists in the subfloor. When using a calcium chloride moisture test for concrete subfloors (ASTM F1869), values must be $\leq 5 \text{ lbs}/1000\text{ft}^2/24 \text{ hrs}$ or $< 80\% \text{ RH}$ with an in-situ probe (ASTM F2170-19a). Moisture readings of wood subfloors must be $\leq 12\%$.

NOTE: Needs to be made that for all product under 6" wide need to be within 4% of the subfloor and all products 6" or wider need to be within 2% of the subfloor when acclimating.

The Manufacturer does not recommend installing flooring under cabinets or other permanent fixtures. If islands, cabinets or other permanent fixtures are installed on top of the flooring, it could cause gapping in the floor planks.



Subfloor Requirements on Above or Below Grade

These recommendations are not intended to supersede federal, regions or local building codes but, as with many other interior finish products, may require modifying existing structural components for a successful installation. Hardwood flooring is not a structural component. The product warranty does not protect against loss caused by inadequate subfloors, flooring substructures or improper installation of said substructures.

Engineered hardwood floors may be installed over any structurally sound subfloor that is flat, clean and dry on all grade levels. All subfloors should be:

- **Clean:** Subfloor must be clean and free of dirt, curing compounds, drywall mud, wax, paint, oil, sealers, adhesives and other debris. These may be removed mechanically. Do not install glue down floors over chemically cleaned substrates.
- **Flat:** Subfloor must be flat within 3/16 inch in a 10-foot radius (5 mm in 3 m) and 1/32 inch in 12 inches. Sand high areas or joints. Fill low areas with a high compressive strength (min. 3,000 psi) Portland cement-based compound. Vertical deflection must not exceed 3/16 inch.
- **Dry:** Wood floor moisture should be evaluated using the guidance supplied above under the heading Job Site Conditions. Concrete subfloors must be cured for a minimum of 60 days. When using a calcium chloride moisture test for concrete subfloors (ASTM F1869), values must be $\leq 5 \text{ lbs}/1000\text{ft}^2/24 \text{ hrs}$ or $< 80\% \text{ RH}$ with an in-situ probe (ASTM F2170). Moisture readings of wood subfloors must be $\leq 12\%$. Test results must be recorded on Page 15 of these instructions and left as a permanent record of testing with the homeowner. If moisture levels exceed these limits, DO NOT INSTALL the flooring until appropriate corrections are made or select the appropriate moisture mitigation adhesive.

NOTE: Basements and crawl spaces must be dry. Use of a 6-mil black polyethylene membrane is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist should be no less than 18 inches and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation. To increase reliability, appropriate subfloor moisture testing should be performed after the HVAC system has been in operation for a minimum of 5 days. Excess moisture on any flooring substrate, if not identified and corrected prior to installation, will cause floor covering failure. Our Warranties DO NOT cover any problems due to moisture levels that exceed these guidelines.

Structurally sound wood subfloor: Nail or screw any areas that are loose or squeak. Vertical deflection must not exceed 3/16 inch. Wood panels should exhibit an adequate fastening pattern, glued, screwed or nailed as system requires, using an acceptable nailing pattern, typically 6 inches (15 cm) along bearing edges and 12 inches (31 cm) along intermediate supports. Flatten edge swell as necessary. Replace any water damaged, swollen or delaminated subflooring or underlayment.

Building codes establish requirements for structural support components of flooring systems which may not provide adequate rigidity and support for proper installation and performance of a hardwood floor. Whenever possible, install flooring perpendicular to the floor joists for maximum stability.

NOTE: When joist spacing exceeds the traditional 16 inches on center, The Manufacturer recommends you apply a thin bead of Performance Accessories Tongue & Groove D3 glue to the bottom side of the groove to lock the tongue and groove profile in place. This will reduce the potential for movement of the tongue and groove which may contribute to squeaking or crackle. When using this method of installation, you may continue to choose to staple or nail down the hardwood depending on your preference. Using a D3 tongue and groove glue with the staple reduces movement as the subfloor deflects.

Structurally sound concrete subfloor: Concrete substrate should be at least 60 days old and constructed in accordance with ASTM E1745. Level substrate and fill all cracks, holes and low spots with a polymer-modified



Portland cement patch or leveling compound. Burnished or steel troweled concrete substrates must be inspected for porosity by placing a few drops of water on the surface. If the water is not absorbed within 3 minutes, the substrate should be considered non-porous. Abrade the surface with 30-grit sandpaper until porosity is achieved. After abrading, remove all debris before proceeding with installation. Glue down floors may be applied to concrete with a rating of 3,000 psi or greater. Glue down application over lightweight concrete (less than 3,000 psi) is not permissible.

Approved subfloor panels should meet or exceed the following guidelines:

- Plywood: Must be minimum CDX EXP 1 grade and conform to U.S. Voluntary Product Standard PS1-19 performance standard or Canadian performance standard CAN/CSA 0325 (NIST PS 2-10).
- Oriented Strand Board: Strand board (OSB) must conform to U.S. Voluntary Product Standard PS 2-18 or Canadian performance standard CAN/CSA 0325 (NIST PS 2). The panels must be tongue and groove and installed sealed side down.
- Particleboard: (Floating installation only.) Must be a minimum 40-lb density, stamped underlayment grade and 3/4 inch (19 mm) thick.

Floor joist/truss spacing will determine the minimum acceptable thickness of the subfloor panels. Joist/truss spacing of 16 inches on center or less for single panel subflooring requires a minimum 5/8-inch (19/32 inch, 15.1 mm) CDX (EXP 1) 4-feet x 8-feet subfloor panels. Joist/truss spacing of greater than 16 inches up to 19.2 inches (488 mm) on center, requires a minimum nominal 3/4-inch (23/32 inch, 18.3 mm) tongue and groove CDX (EXP 1) plywood or OSB PS2-18 4-feet x 8-feet subfloor panels, glued and mechanically fastened. Floor systems with joists/truss spaced greater than 19.2 inches (488 mm) on center up to a maximum of 24 inches (610mm) require minimum 7/8-inch tongue and groove CDX (EXP 1) plywood or OSB PS2-18 4-feet x 8-feet subfloor panels, glued and mechanically fastened. Installation over joist spans greater than 24 inches on center is not recommended. For installation over joist spans greater than 24 inches on center, consult NWFA (National Wood Flooring Association) for panel thickness guidance.

Solid Wood Subfloor — Direct Glue or Staple Down Applications

- Minimum 3/4 inch (19 mm) thick with a maximum width of 6 inch (15 cm) installed at a 45° angle to the floor joists.
- Group 1 dense softwood (pine, larch, Douglas fir, etc.) No. 2 common, kiln dried with all board ends bearing on joists.
- For direct glue down applications, add 3/8-inch (9.5 mm) approved floor panel underlayment.

Existing Wood Flooring — Direct Glue or Staple Down Applications

- Existing engineered flooring must be well bonded/fastened. When gluing over existing wood flooring, the surface finish must be abraded or removed to allow adequate adhesive bond.
- Existing solid hardwood flooring that exceeds 6 inch (15 mm) in width must be covered with 3/8-inch (9.5 mm) approved underlayment and fastened as required.
- Do not install over solid or engineered flooring attached directly to concrete. Instead remove existing wood flooring and follow instructions for installation over concrete.

Wood subfloors should be well nailed or secured with screws. The nails should be ring shank and screws need to be counter sunk. The wood subfloor must be structurally sound, without loose boards, vinyl or tile. If subfloor panels are a single layer, less than 3/4 inch thick, add another single cross layer for strength and stability, minimum 3/8 inch.

Underlayment floor panels must be installed sealed side down. When used as a subfloor, allow 1/8-inch (3.2 mm) expansion space between each panel. If spacing is inadequate, cut in with a circular saw. Do not cut an expansion space on tongue and groove panels. When installing parallel to the floor joists, it may be necessary to increase rigidity of the structural subfloor system by installing an additional minimum of 3/8-inch (9.5 mm) approved



underlayment floor panel.

NOTE: Avoid subfloors with excessive vertical movement no more than 3/16-inch (4.7mm) deflection. If the subfloor exhibits excessive vertical movement (deflection) before installation of the flooring, it will likely do so after installation of the flooring is complete. Indications of excessive deflection are uneven finish wear, fastener release, squeaking, compromised or damaged locking systems, sectional contours such as bowing or dipping in floors and uneven flooring material.

Radiant Heat

The Manufacturer engineered flooring can be used in combination with many types of thermostatically controlled floor heating. The heating system can be cast in a concrete floor or in a thin layer of filler on the surface of a concrete subfloor. It can also be installed under a wood subfloor or installed on the surface of the subfloor as an electrical matting, provided it meets the floor flatness requirements.

Follow the instructions from the supplier of the floor heating system.

- Concrete subfloors must be installed and cured with no heat transfer for a minimum of 60 days.
- The heating system must be in operation for at least two weeks before installation.
- Prior to flooring installation, the system should be set to a suitable installation temperature (18° to 22°C).
- Following installation, temperature should be raised slowly, 1°C, every day until desired temperature is reached.
- The flooring surface temperature, which is the surface of the subfloor or the heat radiating from electric heating mats, should not exceed 29°C (84°F).
- Do not use area rugs on top of engineered flooring installed over radiant heat systems. Area rugs trap heat, creating elevated temperatures capable of damaging engineered flooring.

Lightweight concrete: Engineered wood flooring is not recommended for glue down installation over lightweight concrete subfloors. To test for lightweight or acoustical concrete, scrape a coin or key across the surface of the subfloor. If the surface powders easily or has a dry density of 100 pounds per cubic foot, or less, the engineered flooring should not be installed using the glue down method. Product can be installed using floating installation method. For leveling and repair of lightweight concrete, contact the lightweight concrete manufacturer to ensure correct methods are used.

Existing perimeter glued resilient vinyl and rubber tiles are unacceptable underlayments and must be removed. Terrazzo, vinyl, resilient tile, cork and linoleum or hard surfaces that are dry, structurally sound and level are suitable as a subfloor. As above, the surface must be sound, tight and free of paint, oil, existing adhesives, wax, grease and dirt. Terrazzo and ceramic tile must be scuffed to ensure proper adhesion.

WARNING: Do not sand existing resilient tile, sheet flooring, backing or felt linings. These products may contain asbestos fibers that are not readily identifiable. Inhalation of asbestos dust can cause asbestosis or other serious bodily harm. Check with local, regions and federal laws for handling hazardous material before attempting the removal of these floors.

Direct glue installation: Make sure the floor covering materials are well bonded to the subfloor or underlayment with full spread adhesive and no more than two layers thick, not to exceed 4.7 mm (3/16 inch). With approved wood or wood composite subfloors, if vinyl or tiles are loose, broken or in poor condition, install a 9.5 mm (3/8-inch) approved underlayment grade subfloor panel directly over the flooring materials. Clean the flooring materials as necessary to remove waxes, sealers or cleaning residues to allow a good adhesive bond. Cork floor sealers and surface treatments must be removed. Always perform a bond test prior to beginning direct glue installation.

Before You Start Any Installation Method

To address any moisture-related subfloor issues, either allow the subfloor to dry until it meets the specifications or utilize an appropriate moisture barrier. For further details regarding moisture conditions, please visit



canadianstandardflooring.com.

NOTE: DO NOT INSTALL FLOORING IF MOISTURE TEST RESULTS EXCEED THE RECOMMENDED LIMITS.

- Plan your layout and decide the direction of the installation within the room. Installing planks parallel to windows enhances the hardwood's appearance.
- For a consistent installation look, preselect and set aside hardwood planks that blend well with all trims and moldings. Place these planks next to the most complementary moldings.
- Remove all wall-mounted moldings, such as baseboards and quarter rounds.
- The floor should be installed using planks from at least three cartons to ensure a good color and shade blend throughout the installation.
- Ensure that the ends of the boards in adjacent rows are staggered by at least 15 cm (6 inches), or more for wider products.

NOTE: IT IS NOT RECOMMENDED TO USE A RUBBER Mallet TO INSTALL FLOORING, AS STRIKING THE SURFACE WITH A RUBBER Mallet MAY CAUSE IRREPARABLE DAMAGE TO THE PLANK.

Glue Down Installation Guidelines

Adhesive Selection

The selection of your adhesive will depend on the moisture conditions of the subfloor. Adhesive moisture requirements differ among adhesives and vary based on the type and condition of the subfloor. The subfloor moisture requirements and testing guidelines for each adhesive are outlined below.

Concrete: In situations where excess subfloor moisture is present, the appropriate adhesive must be applied using the 1/4" x 1/4" v-notch trowel specified in the chart for Adhesive, Moisture, and Sound Control.

- A low VOC silane-terminated polymer adhesive designed for use over on-grade or above-grade concrete substrates where high moisture levels may be encountered.
- Compatible with up to 99% RH levels in concrete. When the "Moisture Control" installation method is not utilized, moisture tests must be conducted on all concrete subfloors, regardless of grade level or age. Testing must be performed according to ASTM F-1869 – Calcium Chloride Test, or ASTM F-2170 – in situ RH Probe Test.
- Assess for sealers and curing compounds, as these can limit adhesion and prolong the adhesive's curing time.
- The trowel should be replaced every 3,000 square feet or sooner if wear dictates.
- The product must be used in its entirety once opened, as the lid cannot be resealed.
- Curing time will be influenced by temperature and humidity; higher temperature and humidity will accelerate the curing process.

Glue Application

1. Maintain regulated temperature and humidity for at least 72 hours before, during, and after installation.
2. Apply the adhesive using the recommended trowel, ensuring 95% to 100% adhesive contact with the surface.
 - Wet lay method: Firmly press the flooring into the adhesive immediately after troweling.
 - Walk on method: Press the flooring into the adhesive once it has developed its initial grip, usually after 15 to 20 minutes.
3. Immediately clean any adhesive smudges or drops, as once dried, the adhesive becomes difficult to remove. Clean tools while the adhesive is fresh with a urethane adhesive remover or mineral spirits.



4. Avoid light or regular foot traffic for at least 12 hours and heavy foot traffic for a minimum of 24 hours.
5. Use a clean white cloth with mineral spirits to clean as you work, since cured adhesive on the surface of the flooring can be tough to remove.

Getting Started – Direct Glue

CAUTION: Ensure all guidelines from both the adhesive and flooring manufacturers are strictly followed. Not adhering to these instructions will void your flooring warranties.

General Information for Glue Down Installations

1. Use Portland cement-based patch or skim coat leveling products to correct substrate imperfections. Do not use on lightweight concrete unless specified by the manufacturer.
2. Maintain regulated temperature and humidity 72 hours before, during, and after installation.
3. Install and secure the starter row.
4. Spread adhesive with the recommended trowel, ensuring 95% to 100% adhesive contact. For wet lay method, press the flooring firmly into the adhesive immediately after troweling. After installation, follow the adhesive manufacturer's rolling instructions.
5. Inspect the installation and promptly clean any adhesive smudges or drops. For Modified Urethanes and Silanes, use a wet rag with water or mineral spirits. For Urethane adhesives, use only mineral spirits. **Note:** Urethane adhesive can chemically etch prefinished wood surfaces. Make every effort to avoid getting adhesive on the flooring surface. Keep a urethane adhesive cleaner or mineral spirit on hand for immediate cleaning.
6. Clean tools while the adhesive is still wet using the cleaner specified by the adhesive manufacturer.
7. Restrict light/regular traffic for at least 12 hours, and avoid heavy traffic for at least 24 hours.
8. Refer to the adhesive manufacturer's guidelines on open time, which can be found on the adhesive container.
9. Ensure proper ventilation in the room, using an electric fan if necessary.

Wet Lay Method

Step 1: Select a starter wall, preferably an exterior wall, as it is more likely to be straight and square with the room. Measure out from the wall the width of two planks plus the plank thickness, mark each end of the room, and snap a chalk line.

Step 2: Spread adhesive from the chalk line to the starter wall using the recommended trowel size. It's crucial to use the correct trowel at a 45° angle to ensure the right adhesive spread rate for a proper and lasting bond. Inadequate bonding may result in loose or hollow spots.

NOTE: Replace the trowel every 2,000 to 3,000 square feet, or sooner if necessary, due to wear. This guarantees the proper adhesive spread rate.

Step 3: Install the first row of starter planks with the tongues facing the starter wall and secure them in place. Alignment is essential and can be maintained by using a straight edge along the chalk line (a two-by-four works well) or by top nailing the first row with finishing nails (for wood subfloors) or using adjustable spacers (for concrete subfloors). This prevents the planks from shifting and causing misalignment.

NOTE: You may need to scribe and cut the planks near the wall to fit properly, ensuring a consistent expansion space, as most walls are not perfectly straight. Try to maintain at least a 2-inch width on the scribed plank.

Step 4: After securing the starter rows, spread 2-1/2 to 3 feet of adhesive along the length of the room. Avoid spreading more adhesive than can be covered within approximately 1 hour. Place the tongue into the groove of the plank or strips and press firmly into the adhesive—do not slide planks or strips through the adhesive. If needed, use



a tapping block to fit the planks snugly together at both sides and ends. Wipe away any adhesive from the surface before it cures using a damp cloth.

NOTE: Avoid standing on the flooring during installation. If working on the newly installed flooring is necessary, use a kneeling board.

Secure the starter rows with a straight edge. Once the remaining floor has been laid, return to the start, remove the straight edges, and apply adhesive to the rest of the open subfloor.

Remember, planks near the wall may need to be scribed and cut due to any irregularities along the wall.

Final Touches

Install or re-install any transition pieces, reducer strips, T-moldings, thresholds, baseboards, and/or quarter round moldings. Ensure that trims and moldings are nailed into the wall or subfloor, not the flooring itself. Install the appropriate trim molding at doorways to create smooth transitions, and along walls to cover any gaps resulting from wall irregularities.

Complete the installation by using the wood filler kit that matches the engineered flooring to make minor corrections or fill in areas where brad nails were used in the trim or flooring. Clean the finished floor using **Performance Accessories Floorcare Essentials Hardwood and Laminate Floor Cleaner**. To prevent surface damage, avoid rolling heavy furniture and appliances directly on the floor. Use plywood sheets or appliance lifts if necessary. Additionally, use protective casters or felt pads on the legs of furniture to prevent floor damage.

IMPORTANT: If the floor will be covered, it should first be thoroughly cleaned to avoid grit scratching the finish. Avoid covering the floor with plastic, red rosin paper, felt, wax paper, or reused cardboard, as inks from printed cardboard can damage the hardwood surface. Instead, use a breathable material such as clean, dry, plain uncoated cardboard or Kraft paper. A common reinforced builder's paper is a good option.

Any covering should be taped to base or shoe moldings using low-adhesion tape. Do not tape directly onto the finished flooring. When taping paper or sheets together, tape them to each other, not to the floor. Ensure the floor is fully covered to prevent uneven ambering caused by UV light exposure. Avoid covering the flooring for extended periods to prevent trapped moisture or discoloration.

Staple Down Installation Guidelines

Thickness	Fastener Gauge	Side Spacing	End Spacing
3/8"	20	4"-6"	1"
1/2"	18 not less than 1 1/2" in length	4"-6"	1"
5/8"	18 not less than 1 1/2" in length	4"-6"	1"
3/4"	15.5 g staple or 16 or 18 g cleat	4"-6"	1"



Tongue-and-groove Enhanced Engineered Core hardwood floors can be installed over wood subfloors, excluding Parquet or Masonite. When installing engineered wood planks, ensure that a flooring stapler designed for or properly adjusted to the thickness of the engineered wood is used.

NOTE: To minimize squeaks and noises between the subfloor and the hardwood flooring.

- For all products 5 1/2 inches wide or wider, it is essential to apply a serpentine bead of urethane-based glue under the boards to assist with adhesion.
- For all products under 5 1/2 inches wide, it is necessary to install a 15 lb felt, rosin paper, or an equivalent underlayment over the subfloor before the installation of the engineered wood flooring. This is in addition to any ground cover in crawlspaces.

Important: Not adhering to these instructions will void your flooring warranties.

Layout the Job

Measure out from the ends of your starting wall the width of the plank plus the plank thickness to allow for expansion, and mark both ends. When possible, install the flooring at a 90° angle to the floor joists. Use the marks to snap a chalk line along the starting wall.

NOTE: If the installation requires starting from the center of the room and working in both directions, insert a spline into the groove side of your starter row. Apply a bead of D3 glue or an alternatives adhesive, and then staple. This method will allow you to continue the installation in both directions.

Getting Started – Staple Down

NOTE: Expansion space is required around the perimeter of the room(s) where installation is taking place. The required space should match the thickness of the product being installed: for example, a 3/8-inch thick floor requires a 3/8-inch expansion space, while a 1/2-inch thick floor requires a 1/2-inch expansion space.

Align the planks with the chalk line, positioning the groove side towards the wall. Secure the first starter row by placing brads or small finishing nails along the wall edge, 1 to 2 inches from the ends, and spaced 4 to 6 inches apart along the side. Counter-sink the nails and fill them with wood filler that matches the floor color. Place nails in a dark grain spot for better concealment. The base or shoe molding will cover the nails once it's installed after the flooring is completed.

For the next rows, blind nail through the tongues at a 45° angle. Pre-drilling holes in the tongues may make this process easier. Nail 1 to 2 inches from the ends and every 4 to 6 inches along the sides. The first two rows will need to be blind nailed. Alternatively, a brad Nailer with 1 to 1-3/8-inch brads can be used without pre-drilling. After that, continue the installation using an engineered wood flooring stapler, following the recommended staple size and placement: 1 to 2 inches from the ends and every 4 to 6 inches along the edge tongues. Refer to the floating section for details on end joint spacing and starting additional rows.



Recommended Pneumatic Floor Fastener

Staple 1 to 2 inches from the ends and every 4 to 6 inches along the tongue side of the engineered wood planks to ensure a secure installation. It is recommended to set the compressor initially at 80 to 85 PSI and adjust as necessary to properly set the fastener, preventing it from breaking or going through the tongues. Improper stapling techniques may cause squeaks or surface dimpling on the floor, so adjustments may be required for correct fastener penetration into the nail pocket. Fasteners should sit flush in the nail pocket, not beyond it.

Before starting, use a scrap piece of flooring to set the tools correctly. Always use flooring installation tools with the factory-designed floor plate attached to ensure the proper angle for fastener penetration.

For any product wider than 7 inches, a glue assist is also required for installation. Apply a urethane-based adhesive in a serpentine pattern every 8 to 10 inches on the subfloor, running perpendicular to the direction of the planks.

Glue Clean Up

If any tongue and groove adhesive seeps out from between the planks, let it dry for 10 to 15 minutes, then gently scrape it away using a plastic scraper or putty knife. Any remaining glue can be wiped clean with a damp cloth. Do not allow the glue to dry on the surface of the flooring, as it will be very difficult to remove. Clean up immediately with mineral spirits before the glue dries.

Installer's Responsibility

The warranty does not cover separation of planks or damage resulting from the use of incorrect tape or leaving tape on the floor for too long. These issues fall under the installer's responsibility.

Final Touches

Trim excess underlayment (for floating installations only) and install or re-install transition pieces, such as reducer strips, T-moldings, thresholds, baseboards, and/or quarter round moldings. Trims and moldings should be nailed into the wall or subfloor, not the floor itself. Install the appropriate trim molding at doorways for a smooth transition, and along the walls to cover any gaps caused by wall irregularities.

Finish the installation by using the wood filler kit, which coordinates with the installed engineered flooring, to address minor imperfections or areas where brad nails were used in the trim or flooring. Clean the finished floor with Performance Accessories Floorcare Essentials Hardwood and Laminate Floor Cleaner. To avoid surface damage, refrain from rolling heavy furniture or appliances across the floor. Use plywood or appliance lifts if needed. Protect the flooring by using protective casters/caster cups or felt pads under furniture legs.

IMPORTANT: If the floor is to be covered, thoroughly clean it beforehand to prevent grit from damaging the finish. Do not cover the floor with plastic, red rosin paper, felt, wax paper, or reused cardboard, as inks from printed cardboard can damage the hardwood surface. Instead, use breathable materials such as clean, dry, plain, uncoated cardboard or Kraft paper. Avoid covering the flooring for an extended period, as reduced air circulation can cause a greenhouse effect, damaging the flooring.

Common reinforced builder's paper is a suitable choice. Any covering should be taped to the baseboards or shoe moldings using low-adhesion tape. Avoid taping directly to the finished flooring. When joining sheets of paper or cardboard, tape them together rather than taping to the floor. The entire floor must be covered to prevent



uneven ambering caused by UV light exposure. Prolonged coverage can also lead to moisture issues from trapped condensation, so avoid covering the flooring for long periods.

Cleaning & Maintenance

The best way to care for your new floor is to schedule routine maintenance, which includes sweeping the entire floor at least once a week to remove dirt and debris that may scratch the floor. High traffic areas such as entrances and doorways will require cleaning more frequently, depending upon the amount of concentrated foot traffic. Following these easy steps is the key to keeping your new floor looking beautiful for years to come.

Step 1: Routinely sweep your floor with a soft bristle broom or use a vacuum designed for use on hardwood floors.

WARNING: Vacuums with a beater bar or power rotary brush head can damage a wood floor and should never be used.

Step 2: Apply Performance Accessories Floorcare Essentials Hardwood and Laminate Floor Cleaner to a clean cloth or microfiber mop; do not spray directly onto the floor. **DO NOT USE CLOTHS THAT HAVE BEEN EXPOSED TO FABRIC SOFTENER. IT COULD CAUSE STREAKING.** Use a back-and-forth motion with the mop. When the cloth or microfiber cover becomes soiled, simply replace it with a clean one. Cleaning the floor with a soiled cover could cause streaking.

Most microfiber mop covers are re-usable and can be cleaned using a standard washer and dryer. Refer to the manufacturer's cleaning instructions when washing cloth or microfiber covers. **DO NOT USE CLOTHS THAT HAVE BEEN EXPOSED TO FABRIC SOFTENER. IT COULD CAUSE STREAKING.**

Tips and Warnings

- Sweep regularly with a soft-bristle broom.
- Clean spills immediately and use Performance Accessories Floorcare Essentials Hardwood and Laminate Floor Cleaner.
- Place felt protectors under heavy furniture and chairs.
- Use transition mats at all exterior entrances.
- Avoid using rubber or latex-backed rugs on your floor. Rug pads should extend fully to the edges of the rug for proper function. Choose a soft, non-staining, and non-abrasive rug pad. Clean regularly under rugs and rug pads.
- Spiked heels, shoes in disrepair, or cleated athletic footwear can cause significant damage to the floor.
- Replace hard plastic or metal furniture casters with soft rubber casters, or use a protective mat under the casters.
- Never wet mop or use damp mopping methods that allow moisture to pool on the floor's surface.
- Do not use steam cleaners on your floor, as they can force moisture into the finish and cause damage.
- Avoid using oil soaps, wax, liquid, or any household products, surface cleaners, or polishes not specifically formulated for hardwood floors. Do not use 2-in-1 cleaners containing acrylics or urethane polish to restore gloss, as these can harm the floor.
- Keep pet nails trimmed as recommended by your veterinarian.
- When moving furniture or appliances, protect your floor by using a dolly with clean, soft rubber tires.
- Use protective window coverings to shield hardwood floors from excessive heat during periods of direct sunlight.



Scratches and Dents

With today's active lifestyles, it's important to recognize that hardwood flooring can and will scratch and dent. Refer to the Tips & Warnings section for advice on protecting your hardwood floor. To prevent excessive wear, it's essential to use strategically placed mats and area rugs, along with floor protectors on the legs of chairs and tables.

Transition Mats

Non-Rubberized Transition Mats should be placed at all exterior entrances to minimize tracked-in dirt and reduce moisture during bad weather. Ideally, purchasing two sets of transition mats for each entrance allows for a clean mat to replace the soiled one during routine weekly cleaning, preventing the mat from becoming a source of dirt itself.

Exterior Mats should also be placed at all exterior entrances. These mats should be made of dual fibers: soft fibers to absorb moisture and coarse fibers to remove dirt and grime from shoe soles. Having two sets of exterior mats per entrance ensures one is always in use while the other is being cleaned. During routine cleaning, switch the soiled mat with the clean one to reduce dirt, grit, and moisture entering the home. Routinely clean these mats to prevent them from becoming a source of dirt.

Protection From Sunlight

Hardwood contains acids in its cellular structure, and exposure to sunlight causes these acids to amber, creating a color change known as patina. The wood will naturally reach its warm patina level and stop ambering over time. The degree of patina is influenced by the wood species, the amount of acid, and the level of sunlight exposure. This change is often noticed when a rug is removed, revealing a color difference underneath. To even out the color, expose the entire floor to the same amount of light, and it will gradually become uniform.

Warranty

The Manufacturer warrants that the factory-applied finish will not wear through or lose adhesion under normal use. Additional structural and moisture warranties may apply to this engineered hardwood. Contact your retailer for specific warranty details and durations.

Pre-installation Subfloor Moisture Testing

The installer should use this section to record pre-installation moisture content readings. This completed form, along with at least one carton end label, purchase receipt, and floor care maintenance instructions, should be provided to the homeowner for their records.



Date:

Installation company:

Moisture readings taken by:

Moisture Content:	% Average moisture content of subfloor
	% Average moisture content of hardwood
	% Difference between subfloor and flooring

Concrete	Subfloor
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Date:

Company performing concrete moisture readings:

Moisture readings taken by:

Test Method Used:	Calcium Chloride (<i>ASTM F1869</i>)
	RH (<i>ASTM F2170-02</i>)
	Electronic Meter

Moisture Readings: