

Note: These installation instructions are for the experienced hardwood flooring installer. For additional instructions or assistance please call the National Wood Flooring Association at 1.800.422.4556.

Installation Instructions

Tuscany Olive Wood Engineered Hardwood Flooring

Thank you for choosing Tuscany Olive Wood Hardwood Flooring. Please thoroughly review and adhere to the following installation instructions to protect your or your customer's investment.



INSTALLER / OWNER RESPONSIBILITIES

- Wood is a natural product containing natural characteristics such as natural variations in color, tone and graining. Some variation in color is to be expected in a natural wood floor. Even though our product goes through many inspections before it leaves the plant, it is the customer and installer's responsibility for final inspection prior to installation. If material is not acceptable, do not install it and contact the seller immediately. When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading allowance. Add 10% for diagonal installations.
- It is the responsibility of the installers/owner to determine if the job site sub-floor and job site conditions are environmentally and structurally acceptable for wood floor installation. The manufacturer declines any responsibility for wood failure resulting from or connected with sub-floor, subsurface, for site damage or deficiencies after hardwood flooring has been installed.
- Use of stain, filler or putty for defect correction during installation should be accepted as normal procedure.

Wood Dust Caution

Sawing, sanding and machining wood products can produce wood dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

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

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

TOOLS REQUIRED

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| • Chalk line and chalk | • Moisture meter | • Adhesive cleaner |
| • Hardwood flooring cleaner | • Broom or vacuum | • If nailing/stapling, we recommend using a 20 gauge 1" or 1 1/2" E POWERCLEAT from POWERNAIL, with a power nailer. Power nail recommends model 200 Pneumatic Tongue and groove Powernailer equipped with BA adapter plate, or model 200 manual. |
| • Nail set | • Jam saw | |
| • Tape measure | • Taping block | |
| • Hammer | • Miter saw | |
| • Rubber mallet | • Safety glasses | |
| • Pencil | • Straight edge | |
| • Electric power saw | • Blue tape | |
| • NIOSH designated mask | • Square | |
| • Electric drill and bits | • Utility knife | |
| • Pneumatic finish nailer with 1 1/2" or 2" nails | • Pry bar | |
| • 6d or 8d nails | • Urethane wood flooring adhesive, trowel, and towel if gluing | |

Caution: Improper use of a power nailer can mark the surface of the flooring. Specified Flooring is not responsible for damage caused by the misuse of tools or the use of improper tools.

Job Site Inspection

- The building should be closed in with all outside doors and windows in place. All concrete, masonry, framing members, drywall, paint and other wet work should be thoroughly dry. Please allow new concrete to dry for 60 days.
- The wall coverings should be in place and the painting completed except for the final coat on the base molding. When possible, delay installation of base molding until flooring installation is complete.
- Exterior grading should be complete with surface drainage directing water away from the building. All gutters and downspouts should be in place.
- Engineered wood flooring can only be installed on any grade level. Do not install in full bathrooms.

- Basements and crawl spaces must be dry and well ventilated.
- Crawl space must be a minimum of 24" from the ground to underside of joists. A ground cover of 6-8 mil polyethylene film is essential as a vapor barrier with joints overlapped 6" and taped. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. The vents should be properly located to promote cross ventilation.
- Subfloor must be checked for moisture content using the appropriate testing method.
- Permanent air conditioning and heating systems should be in place and operational. The installation site should have a consistent room temperature of 60-75° F and humidity of 35-55% for 14 days prior, during and until occupied, to allow for proper acclimation.

Asbestos Caution: 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, state, and federal laws for handling hazardous material before attempting the removal of these floors.

Storage and Handling

- Wood flooring should be stored in the room where it is to be installed for at least 48 hours prior to installation in order to acclimate the flooring to the room or as long as necessary to meet minimum moisture requirements for moisture content.
- Store in a dry place being sure to provide at least a four-inch air space under cartons.
- Flooring should not be delivered until the building has been closed in with windows and doors in place and until cement work, plastering and all other wet work is completed and dry.
- New concrete slabs require a minimum of 60 days drying time before covering them with a wood floor.

STAPLE DOWN INSTALLATIONS

Improper pressure settings and failure to use proper adaptors can cause severe damage to the flooring. The correct fastening machine and air pressure setting will properly set the staple in the nail pocket. Low air pressures may fail to properly set the staple and damage adjoining boards. Air pressures set too high may cause damage to the tongue, preventing installation of adjoining boards and cause blisters on the face of the flooring. Make certain the compressor has a regulator in-line with the air hose for proper adjustment. Set pressure at 70 PSI to begin with and adjust until proper staple setting occurs. Any water damaged swollen or delaminated subflooring materials will not hold staples and must be repaired or replaced.

Subfloor Requirements

- **Clean:** Free of wax, paint, oil or debris
- **Level / Flat:** Within 3/16" in 10' and / or 1/8" in 6"
- **Structurally Sound**
- **Dry:** Moisture content of a wood floor must not exceed 13% on a wood moisture meter.

Subfloor Types

A. Concrete Slabs

Engineered wood flooring can be glued directly to concrete using the recommended adhesive. Do not use a concrete sealer and do not install over one. Prime absorbent and porous surfaces with CLL 221 Fast Drying Polyurethane Primer. On substrates that conform to standards and that are suitable for installation of wood flooring, the use of a primer is not essential. The concrete must be of high compressive strength. New concrete slabs require a minimum of 60 days drying time before covering them with a wood floor. All concrete should be tested for moisture content according to ASTM F 1869. Acceptable test methods include the following:

- **Calcium Chloride test.** The maximum moisture transfer must not exceed 3lbs. / 1000 square feet with this test.
- **Tramex Concrete Moisture Encounter Meter.** Moisture meter readings should not exceed 4.5 on the upper scale.

A "Dry" slab as defined by these tests can be wet at other times. These tests do not guarantee a dry slab. All concrete slabs should have a minimum of 6 mil poly film moisture barrier between the ground and the concrete.

Concrete sub-floors must be dry, smooth (level with 3/16" in a 10 foot radius or 1/8" in 6') and free of structural defects. Hand scrape or sand with a 20-grit #3-1/2 open face paper to remove loose, flaky concrete. Grind high spots in concrete and fill low spots with a Portland based leveling compound (min. 3,000 p.s.i.). Concrete must be free of paint, oil, existing adhesives, wax grease, dirt and curing compounds. These may be removed mechanically but do not use solvent-based strippers under any circumstances. The use of residual solvents can prohibit the satisfactory bond of flooring adhesives. It is important to ensure a proper

bond between the adhesive and the concrete, and the planks or strips. Tuscany Olive Wood hardwood flooring may be installed on-grade, above grade, as well as below grade where moisture conditions do not exist.

To ensure a long lasting bond, make sure that the perimeter of the foundation has adequate drainage and vapor barrier.

B. Light Weight Concrete

Light weight concrete that has a dry density of 100 pounds or less per cubic foot is only suitable for engineered wood floors when using the floating installation method. Many products have been developed as self-leveling toppings or floor underlayments. These include cellular concrete, resin-reinforced cementitious underlayments, and gypsum-based materials. Although some of these products may have the necessary qualifications of underlayment for wood flooring installations, others do not. To test for lightweight concrete, scrape a key or coin across the surface of the sub-floor. If the surface powders easily or has a dry density of 100 pounds or less per cubic foot, use only the floating installation method.

C. Wood Subfloors

- 3/4" CDX grade plywood
- 3/4" OSB PS2 rated underlayment

Wood sub-floors need to be well nailed or secured with screws. Nails should be rick shanks and screws need to be counter sunk. The wood sub-floor needs to be structurally sound and dry. They should not exceed 14% moisture prior to installation. If the sub-floor is single layer, less than 3/4" thick, add a single cross layer for strength and stability (minimum 5/16" thick for a total 1" thickness). This is to reduce the possibility of squeaking. Wood sub-floors must be free of paint, oil, existing adhesives, wax grease, dirt and urethane, varnish etc. Underlayment grade OSB (not the wax side) is also suitable sub-floors.

Bonded: Install a suitable moisture retardant followed by a plywood subfloor with a minimum thickness of 3/4". Allow 1/2" expansion space around all vertical objects and 1/8" between all flooring panels. The panel must be properly attached to the subfloor using a minimum of one fastener per square foot and more if necessary. Use pneumatic or powder actuated fasteners. Do not hand nail the subfloor with concrete nails. Install a moisture retardant barrier with joints lapped 6" and begin installation of flooring using 1 1/2" fasteners.

Staple-Down or Glue Down

Make sure existing subfloor is dry and well nailed or screwed down every 6" along each joist to avoid squeaking or popping before the floor is installed. Measure moisture content of both subfloor and hardwood flooring to determine proper moisture content with a reliable wood moisture meter. The wood subfloor must not exceed 13% moisture content as measured with a reliable wood moisture meter. The difference between the moisture content of the wood subfloor and the wood flooring must not exceed 4%.

Optimum performance of hardwood floor covering products occurs when there is no horizontal or vertical movement of the subfloor. The minimum subfloor recommendations described above are 16" O/C joist spacing. The thicker, preferred subfloor recommendations described above will allow 19.2" joist spacing if the joist manufacturer's recommended span is not exceeded. Spacing in excess of 19.2" O/C may not offer optimum results. Install flooring perpendicular to the floor joists when possible. Installations should not be made parallel to the floor joists or on joist spacing that exceed 19.2" O/C unless the subfloor has been properly stiffened, Stiffening may require the addition of a second layer of subflooring material to bring the overall thickness to at least 1 1/8".

All underlayment panels should be spaced 1/8" apart to insure adequate expansion space. This can be achieved by using a circular saw set at the depth of the underlayment and cutting around the perimeter of the panel. T&G panels normally have built in expansion; Do not cut around the perimeter of T&G panels. Do not install over existing glue-down floors. Do not install over nailed floors that exceed 3 1/4" in width. Wide width floors must be overlaid with plywood. When installing over existing wood floors parallel with the flooring, it may be necessary to install an additional 1/4" layer of plywood to stabilize the flooring or install the wood floor at right angles. Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

D. Resilient Tile, Resilient Sheet Vinyl & Cork Flooring

Staple-Down

Make sure the vinyl or tile is full spread adhesive and well bonded to the subfloor. Do not install over more than one layer, which does not exceed 1/8" in thickness over suitable subfloor. If vinyl or tiles are loose, crumbled, or in poor condition, install an underlayment directly over the sheet vinyl or vinyl tiles.

Note: *Perimeter glued resilient vinyl and rubber tiles are unacceptable underlayments and must be removed.*

Caution: Some older type tiles become brittle with age. Ascertain that the staple will penetrate these materials and that breakage does not occur. Remove if necessary.

Glue-Down

If the tiles or sheet goods are well bonded, clean the surface thoroughly with a good quality household detergent. De-gloss flooring as necessary to create a good adhesive bond using an abrasive pad. If vinyl appears to have a coating of wax or other maintenance materials, it must be removed with the appropriate floor stripper. Allow ample drying time.

Caution! 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, state, and federal laws for handling hazardous material before attempting the removal of these floors.

E. Ceramic, Terrazzo, Slate and Marble

All grout joints and broken corners that exceed 3/16" must be filled with a cementitious leveling compound mixed with latex additive. The surface should be cleaned and abraded to create a good bonding surface for the adhesive. Loose tiles must be re-adhered to the subfloor or filled as above. Remove all sealers and surface treatments.

Subfloor Moisture Check

Adhesive may be used for on and above grade applications and on all common substrates. On and below grade applications are susceptible to moisture and should be tested for moisture prior to installation in several locations within the installation area. Acceptable conditions for above, on, and below grade applications are:

- less than 5 lbs./1000 sq.ft./24 hrs. on a calcium chloride test
- less than a reading of 5.0 on a Tramex Concrete Moisture Encounter (moisture meter)
- wood substrates must have a moisture reading of less than 14% when using a Tramex or equivalent moisture meter.

To correct any sub-floor problems, concerning moisture, either wait until the sub-floor dries to meet specifications or use an appropriate moisture barrier.

F. Radiant Heated Subfloors

Always make certain the product selected is recommended for this type application.

- System must be operational and heated for at least 7 days prior to beginning the installation.
- Use a control strategy that brings the floor through temperature changes gradually which may include an external thermostat.
- Turn off heat and let subfloor cool down to room temperature 3-4 hours prior to starting the installation.
- Before installation begins, ascertain that the heating system is designed and controlled for wood flooring and that the circuit does not include other floor covering types. Failure to do so may cause excessive heat damage and shrinkage. NOTE: Refer to radiant heat system manufacturer's precautions for staple-down installation. Beware of stapling through radiant tubing or mesh.
- After installation, turn system back on immediately. The finished floor surface must not exceed 85°F (29°C) throughout the life of the floor.
- Radiant heating systems normally create dry heat that can lower interior humidity levels. It may be necessary to add humidity with humidifiers to maintain the recommended levels (35-55%) and prevent damage to the wood floor.
- The flooring should be end-glued over radiant heat to reduce longitudinal shrinkage. Apply a bead of the recommended wood glue to the groove end then insert the tongue. Wipe excess adhesive away immediately.

PREPARATION FOR INSTALLATION

Remove all moldings and wall-base and undercut all door casings with a hand or power jam saw using a scrap piece of flooring as a guide.

Installation Tips

- When installing a pre-finished wood floor be sure to blend the wood from several cartons to ensure a good grain and shading mixture throughout the installation.
- Whether you choose to install the floor with glue, nails, or staples start by using random length planks from the carton or by cutting four to five planks in random lengths, differing by at least 6". As you continue working across the floor be sure to maintain the 6" minimum between end joints on all adjacent rows. Never waste material; use left over pieces from the fill cut to start the next row or to complete a row.

- Installation parallel to the longest wall is recommended for best visual effects, however, the floor should be installed perpendicular to the floor joists unless subfloor has been reinforced to reduce subfloor sagging.
- Expansion space is required along the perimeter of the room. Expansion space is dictated by the thickness of the product. For example, 3/8" thick flooring requires 3/8" expansion space.
- Our unique milling process creates built in expansion naturally. The tongue and groove configuration is designed to leave small expansion in the floor during installation. Avoid using tapping blocks, machines or systems that eliminate this built in expansion.

INSTALLATION

Step 1: Establish a Starting Point

- In at least two places, measure out equal distance from the starting wall and mark 12"-18" from the corners and 3 1/8" from the wall. Mark these points and snap a chalk line figure.

Step 2: Install Moisture Barrier

- Roll out the materials (6 mil polyethylene or 15lb. roofing felt or resin paper) in the same direction as the flooring will be installed allowing the moisture retardant barrier to extend 3"-4" up the walls.
- Position the moisture retardant barrier so that the chalk lines can be seen through these materials.
- Staple or tape at the corners to hold the moisture retardant barrier in position.
- Overlap moisture retardant barrier 6" at all joints and apply duct tape to seal the seams. The first piece of moisture retardant barrier will be secured when the first row of flooring is installed.

Staple-Down Installation:

Step 3: Install First Rows

- Use the longest, straightest boards available for the first two rows.
- Align tongue of first row on chalk line. The groove should be facing the wall.
- Use a pneumatic brad nailer to face nail the groove side 1/2" from the edge at 6" intervals and 1"-2" from each end then at a 45° angel down through the nailing pocket on top of the tongue or pre-drill the nail holes 1/2" from back/groove edge, 1"-2" from each end, and at 6" intervals. Pre-drill at the same intervals at a 45° angle down through the nailing pocket on top of the tongue. Face nail the groove side where pre-drilled. When complete, blind nail at a 45° angle through the tongue of the first row. Fasten using 4d or 6d nails. Countersink nails to ensure flush engagement of groove. Avoid bruising the wood by using a nail set to countersink the nails. Continue blind nailing using this method with following rows until stapler can be used.
- End joints of adjacent rows should be staggered a minimum of 6" to ensure a more favorable overall appearance.

Step 4: Installing the Floor:

Staple-Down Installation

- Set the compressor on the staple gun as previously described.
- Fasten a sacrificial board to the floor. Check for surface damage, air pressure setting, tongue damage, etc. before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the board.
- Begin installation with several rows at a time, fastening each board with at least two fasteners, 3" - 4" apart and 1" - 2" from the ends. Tighten boards as necessary to reduce gaps before fastening.
- End joints of adjacent rows should be staggered 6" when possible to ensure a more favorable overall appearance.
- The last 1-2 rows will need to be face-nailed where clearance does not permit blind nailing with stapler or brad nailer. Brad-nail or pre-drill and face-nail on the tongue side following the nailing pattern used for the first row.
- Rip final row to fit and face-nail. If the final row is less than 1" width, it should first be edge-glued to the previous uninstalled row and the two joined units should be face-nailed as one.

Glue-Down Installation:

Step 3: Spread the Adhesive

- Use the recommended trowel to get required spread rate and ridging height.
- Use recommended urethane adhesive and follow manufacturer's recommendations.
- Clean adhesive from the surface of the floor frequently. Do not use blue tape before adhesive is removed. Use clean trowel, changed frequently to prevent haze and adhesive residue.

- Change the trowel every 2000 – 3000 square feet due to wear down of the notches. This assures you always get the proper spread of adhesive.

Step 4: Installing the floor

- Use the longest, straightest boards available for the first two rows. The first row should be installed with the edge of the groove lined up on the chalk line. The tongue should be facing the starting wall. The first row must be aligned and seated in the adhesive as all additional rows will be pushed back to this original row.
- When installing pieces, engage the end joint first as close to side tongue and groove as possible and then slide together tightly to engage side joint tongue and groove. To avoid adhesive bleed-through and memory pull back avoid sliding pieces through the adhesive as much as possible when placing them in position.
- Check for a tight fit between all edges and end of each plank. End joints of adjacent rows should be staggered 6" when possible to ensure a more favorable overall appearance. If necessary, nail a sacrificial row with 1" nails on the dry side of your chalk line to help hold the first row in place.
- It may necessary to align product with a cut-off piece of scrap as shown.
- To eliminate minor shifting or gapping of product during installation, use 3M Scotch Blue 2080 tape to hold the planks together. All urethane adhesive should be cleaned from the surface before applying tape. Cured adhesive is very difficult to remove. After installation is complete, remove all the 3M Scotch blue tape from surface of newly installed flooring. Do not let tape residue remain on flooring longer than 24 hours. Avoid use of masking tape, which leaves an adhesive residue.
- Be sure not to spread adhesive too far ahead of your work area. 2 1/2 - 3' is recommended.
- If the adhesive skins over and fails to transfer, remove and spread new adhesive to achieve proper bonding to the subfloor, Occasionally lift a board and check for adhesive transfer. Adequate adhesive transfer is necessary to ensure sufficient holding strength.
- If the floor is to be covered, use a breathable material such as cardboard. Do not cover with plastic.
- Complete the installation using this same technique for the remainder of the floor, ripping the final boards to fit and allowing appropriate expansion space.

All Installations

Step 5: Complete the Job

- Clean the floor with the urethane adhesive cleaner. Complete clean up with a thorough cleaning using recommended no wax cleaner.
- Re-install any transition pieces that may be needed, such as reducer strips, T-Moldings, thresholds. We have moldings that are available to match with your flooring.
- Re-install all base and / or quarter round moldings. Nail moldings into the wall and not the flooring.
- Do not cover the floor while the floor is still moveable.
- To prevent surface damage avoid rolling heavy appliances or furniture on the floor. Use plywood, hardboard or appliance lifts if necessary.

ADVISE YOUR CUSTOMER OF THE FOLLOWING

- Recognizing that wood floor dimensions will be slightly affected by varying levels of humidity within your building, care should be taken to control humidity levels within the 35%-55% range.
- **Heating Season:** A humidifier is recommended to prevent excessive shrinkage in wood floors due to low humidity levels. Wood stoves and electric heat tend to create very dry conditions.
- **Non-Heating Season:** Proper humidity levels can be maintained by use of an air conditioner, dehumidifier, or by turning on your heating system periodically during summer months. Avoid excessive exposure to water from tracking during periods of inclement weather. Do not obstruct in any way the expansion joint around the perimeter of your floor.
- Detailed maintenance guidelines can be found at www.tuscanyolivewood.com

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