

Prefinished Engineered Hardwood Flooring Installation.

Please read carefully.

Woodwright Hardwood Floor Company Products are intended for installation by professionals only.

Follow these instructions or current National Wood Flooring Association (NWFA) Guidelines which ever are more stringent at time of installation.

Confirm if you are installing oil or urethane finish before beginning and proceed accordingly.

IMPORTANT: All finish pieces such as reducers, thresholds, should be ordered with the flooring to ensure that they match the finish.

PRODUCT SPECIFICATIONS:

The Woodwright Hardwood Floor Company, Shop Finished Engineered Flooring is a product that can be nailed/stapled to an appropriate OSB or plywood subfloor or glued down to acceptable substrates with the adhesives listed. It is a prefinished, tongue and groove, end-matched product with random lengths. Installing a pre-finished hardwood floor requires a slower and more careful installation to prevent damage to the finished surface.

However, once this floor is installed, the job is complete, and the floor is ready to use. No sanding, no staining and no finishing is required for urethane, however oil may require a field coat after installation.

The Woodwright Hardwood Floor Company Shop Finished Engineered Flooring is a natural product and color will vary from board to board. Therefore, the installer should take care in the placement of each board to ensure good color and shade mixture throughout the entire installation.

ATTENTION! INSTALLER/OWNER RESPONSIBILITIES

Beautiful hardwood floors are a product of nature and, therefore, they will show variations in color, grain, texture, and appearance. These wood floors are manufactured in accordance with accepted industry standards, which permit a defect tolerance not to exceed 5%. The defects may be of a manufacturing or natural type.

- The installer assumes all responsibility for final inspection of the product's quality. This inspection of the flooring MUST be done before installation. Carefully examine flooring for color, finish and quality BEFORE installing it. If there are questions of acceptability, contact the seller immediately.
- Prior to installation of any hardwood flooring product, the installer must determine that the job/site environment and the sub-floor involved meet or exceed all requirements as stipulated in installation instructions and NWFA, recommendations.
- Manufacturer accepts no responsibility for product failure resulting from sub floor or job site environment deficiencies.
- ✓ The installer/owner has final inspection responsibility for grade, manufacture and factory finish. He/she must use responsible selectivity and hold out or cut off pieces with defects, whatever the cause.
- ✓ The use of stain, filler or putty during installation should be accepted as normal procedure.
- ✓ When flooring is ordered, it's suggested that 10% be added to the actual square footage needed for cutting allowance on straight-run installations. For installations with islands, irregular perimeter walls, flooring run on a diagonal or parquet flooring; it is suggested that you ask your supplier for a cutting allowance on these or other unique installations. Cutting factors can vary widely and it's very important to allow extra for cutting since ordering additional material later will delay your project and possibly result in mismatches of floor color.
- Should an individual piece be doubtful as to grade, manufacture or factory finish, the installer should not use the piece.
- ✓ Once a piece of flooring has been installed, it is deemed to have been acceptable; thus, no claims will be honored for finish, milling or defects.

PRE-INSTALLATION PROCEDURES - Job Site Inspection

- Hardwood flooring should be one of the last items installed on a job. All work involving water or moisture (concrete, plumbing, acoustical ceilings, drywall taping, painting, stone or tile installations, etc.) should be completed prior to wood flooring being installed.
- ✓ This product can be installed on, above, or below grade. Glue-down installations of engineered flooring only are recommended for below grade. **Installation below grade must use Bostik MVP first and have less than 3% calcium chloride results.
- Below-soil installations and installations in structures that have planters attached to adjoining walls require that not only the floor, but all surfaces must match the moisture guidelines mentioned below.
- ✓ The building should be closed in with all outside doors and windows in place.

- Exterior grading should be complete with surface drainage directing water away from the building. All gutters and down spouts should be in place.
- Basements and crawl spaces must be dry and well ventilated in accordance with NWFA recommendations. Black 6 mil plastic is required to cover soil in a crawl space.
- ✓ Sub-floor must be checked for moisture content using calcium chloride test.
- ✓ 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 to installation, during installation, and until occupied, to allow for proper acclimation.
- Flooring must also be kept inside, placed in the room of installation and allowed to acclimate prior to installation. Acclimation time will vary depending on site conditions and can range from days to weeks. See current NWFA guidelines. As of this publication, a maximum of 4% difference in moisture content between flooring and sub floor is required.

PRE-INSTALLATION PROCEDURES - Sub-Floor Guidelines and Preparation ACCEPTABLE SUBSTRATES

- Unsealed Concrete slabs- minimum 3000 psi. It is the installers responsibility to test or verify that the slab has no contaminants such as sealers, paint over-spray, etc.
- Appropriate OSB (23/32") or plywood sub-floor (3/4"). When installing approved sub-floor, refer to specific structural panel and manufacturer's instructions for joist spacing and nailing requirements.
- Over existing wood floors, install at 90 degrees.

SUB FLOOR INSPECTION

All sub-floors and sub-floor systems must be structurally sound and must be installed following their manufacturer's recommendations. Our warranties DO NOT cover any problems caused by inadequate substructures or improper installation of said substructures. See the NWFA Guidelines in the NWFA Technical Reference Manual.

- CLEAN your sub floor must be free of wax, grease, paint, oil, sealers and other debris. Make sure there are no loose areas and that
 the sub floor is structurally sound.
- **LEVEL/FLAT** within 3/16" in 10 radius and/or 1/8" in 8' radius. Sand high areas or joints. Low areas can be filled with fillers that are recommended by the adhesive manufacturer, if leveling concrete. Other leveling products are available for wood sub-floors. Sub floor irregularities and undulation may cause any wood flooring installation to develop hollow spots between the flooring and the sub-floor. These hollow spots are not the result of any wood flooring manufacturing defect and are not covered by the Woodwright Hardwood Floor Company Warranty.
- STRUCTURALLY SOUND on wood sub-floors, prior to installing Woodwright Hardwood Floor Company flooring, nail or screw any loose areas that squeak. Replace any water- damaged sub flooring or underlayment.
- **DRY** Moisture content of plywood sub floor must not exceed 12% on a wood moisture meter or read more than a 4% difference than moisture level of product being installed. Moisture content of a concrete sub floor must not exceed 3 lbs with a calcium chloride test. If moisture exceeds 3 lbs with a calcium chloride test, DO NOT lay the flooring. Note: Bostik's MVP can be used to reduce vapor emissions. It is a recommended product to use, with the Bostik's Best Adhesive when moisture exceeds 3 lbs with a calcium chloride test.

SUB-FLOOR DETAILS:

• CONCRETE SLABS - You can glue flooring directly to the concrete. Do Not use a concrete sealer. All concrete sub floors must be tested for moisture content. Initial moisture testing can be done with a Tramax Meter, or a Calcium Chloride test. Moisture should not exceed 4.5 on a Tramax Meter or 31bs with a calcium chloride test. Initial testing can be done using an electronic meter as a survey tool. Final acceptance should be based on a calcium chloride test before proceeding with the installation. Test several areas, especially near exterior walls and walls containing plumbing.

*ASTM F-1869 procedures in calcium chloride test must be followed specifically to get accurate readings.

- WOOD FLOOR TYPES Make sure sub floor is dry and well nailed or screwed down per manufacturer's recommendations to avoid squeaking or popping before the floor is installed. Level any raised edges by sanding. When installing over old wood floors, install the new flooring at a 90° angle to the sub floor. Moisture content of wood sub floors should be between 6-10% Moisture Content. In general, wood or plywood sub floors should not exceed 12% moisture content or 4% moisture content difference between wood flooring and sub-floor.
- Resilient tile & resilient sheet vinyl
- Woodwright Hardwood Floor Company does not recommend installing over vinyl. Woodwright Hardwood Floor Company does not
 warranty installation over vinyl.

FINAL ROOM PREPARATIONS

As part of your sub floor preparation, remove any existing base, shoe molding or doorway thresholds. These items can be replaced after installation of the floor. All door casings and jambs should be notched out or undercut to allow for expansion of the floor and to avoid difficult scribe cuts.

DO NOT USE ANY TYPE OF TAPE TO TEMPORARILY HOLD FLOORING IN PLACE DURING INSTALLATION; THIS CAN CAUSE DAMAGE TO THE SURFACE OF THE FLOOR.

STAPLE or NAIL DOWN INSTALLATION - TOOLS AND ACCESSORIES NEEDED FOR INSTALLATION

15 lb Asphalt Paper

Pneumatic Stapler or Nailer. Use manufacturer's recommended staples or nails.

Hammer

Hand or Power Saw

Chalk Line

Mineral Spirits and Clean Rags (NEVER use Lacquer thinner) <u>DO NOT USE MINERAL SPIRITS ON THE FACE OF OIL FINISHED FLOORS.</u>

Electronic Moisture Meter

Broom and Vacuum

Important: Wood working is inherently dangerous. Please follow all tool manufacturer's safety recommendations, common sense, and industry standard safety precautions.

STEP 1: UNDERLAYMENT:

Cover sub floor with 151b asphalt felt paper. Roll paper over the clean substrate and tack. The next row of paper should be rolled to butt the joints, do not overlap. This process will keep dust/dirt from hardwood and retard the moisture from below.

STEP 2: SET UP EQUIPMENT:

Inspect Equipment prior to use. Test on scrap material first. When used improperly, the staples/nails can damage the flooring. Parts that engage the plank must not have any exposed sharp edges that can scratch or damage the flooring. Make sure the tool's adapters seat properly in the tongue of the flooring. Note: Use only manufacturer's recommended staples or nails. Make sure pressure is set according to manufacturer's recommendations.

STEP 3: MARKING YOUR STARTING LINE:

We recommend you install your flooring parallel to the longest outside wall in the room. Measure out from wall 4½" for 4" products, 6½" for 6" products, etc. Snap a chalk line parallel to the wall. Allow a minimum of at least ½" at all vertical surfaces such as perimeter walls, posts, and islands

STEP 4: LAYOUT STARTER ROW:

Lay one row of plank along the entire length of the working line. Place groove edge of flooring toward the starting wall. Use small finish nails for top nailing the edge closest to the wall. Nail or staple the tongue edge of the flooring in the normal manner. Space fasteners at 6"-8"apart.

STEP 5: INSTALLING THE FIELD FLOORING:

Continue installing each additional row of flooring, maintaining proper pattern repeat. Distribute lengths to avoid "H" patterns and end joints less than 8 inches in adjacent runs. A random mixing of the various surface-graining configurations and color are suggested to enhance the natural beauty of the floor. Floor should be installed from several bundles at the same time to ensure a good color and shade mix. Note: Oil finished flooring may have an occasional piece of separator paper stuck to the finished surface; the paper can be easily removed with a wet rag. Always tap against the tongue, tapping the groove may damage the surface or edge. Nail flooring through the tongue on a 45-degree angle (blind nailing) with the proper adapter. Install the nails or staples no further than 1" from the end of each board and 6" to 8" on center, using 1" staples or 11/4" to 11/2" flooring cleats. Do not work off the newly installed flooring. Keep the flooring clean of dust and debris as you work.

STEP 6: FINAL ROW INSTALLATION:

When you get to the far wall you may have to cut the width of the final row to fit it against the wall, be sure to leave at least ½" between the last row and the wall. The tongue for the final row will need to be removed for a clean fit. Use a "Last Boards Puller" to snug the last row of planks with the completed second to last row. You again will need to face nail close to the wall to secure the flooring.

STEP7: COMPLETE THE JOB:

Install any transition pieces that may be needed, such as reducers, thresholds, etc. Reinstall your base and/or quarter round moldings. Be certain to nail molding into the wall, not the floor. (Note: All finish pieces should be ordered with the flooring to ensure that they match the finish.)

STEP 8: CLEAN UP AND PROTECTING THE NEW INSTALLATION:

Flooring should be kept clean during and after the installation. All areas that have been completed should be covered with protective rosin paper to prevent damage to the finish. If heavy trades will be occupying the home, we recommend that plywood or Masonite be placed on top the rosin paper to prevent the floor from being damaged. Never use plastic or polyethylene sheeting.

STEP 9: FINAL POLISH PRIOR TO MOVING IN FURNISHINGS:

See additional instructions for oil finishes or contact us for instructions.

GLUE DOWN INSTALLATION - TOOLS AND ACCESSORIES NEEDED FOR INSTALLATION

Bostik's BEST Urethane Adhesive for Glue Down Installations. Use with Bostik's MVP (moisture barrier) on flooring wider than 6" is required. Notched Trowel (use Bostik's recommended trial)

Hammer

Hand or Power Saw

Chalk Line

Mineral Spirits and Clean Rags (NEVER use Lacquer thinner)

Electronic Moisture Meter/ Calcium Chloride Test Kit

Broom and Vacuum

STEP 1: ADDITIONAL SUB-FLOOR INSPECTION AND PREPARATION

Surface areas requiring patching or leveling must be done using Ardex leveling products. Manufacturer's recommendations and instructions need to be followed.

Note: Bostik's product, MVP, can be used to reduce vapor emissions when using the glue down method of installation. It is an acceptable product to use, with the Bostik's Best Adhesive, when moisture exceeds 3 lbs with a calcium chloride test. This additional process requires a minimum of 12 hours to cure. Manufacturer's recommendations and instructions need to be followed.

STEP 2: MARKING YOUR STARTING LINE

We recommend you install your flooring parallel to the longest outside wall in the room. Measure out from wall 4½ for 4" products, 6½" for 6" products, etc. Snap a chalk line parallel to the wall. Allow at least ½" room for expansion around the perimeter of the room. Starter blocks may be inserted between the wall and the first row to prevent movement as the rest of the flooring is being installed.

STEP 3: SPREAD THE ADHESIVE

Before use, cover areas of trowel that are not used to spread adhesive with removable blue tape. After use, simply tear off tape before material cures. Clean remainder of trowel with a dry cloth, mineral spirits or adhesive cleaner. The urethane adhesive should not be applied if sub floor is below 55F degrees. Spread a sufficient amount of adhesive with the recommended Bostik's notched steel trowel in an area that is to be covered. Hold trowel at a 45-degree angle. The trowel will leave ridges of adhesive and very little adhesive between the ridges. OPEN TIME MAY VARY DUE TO INDIVIDUAL CLIMATE CONDITIONS. Humidity must be controlled between 35-55% for successful performance during and after installation. During the installation, occasionally remove a flooring unit from the sub floor and inspect the back for proper adhesive transfer. Glue transfer of at least 80% is necessary to ensure sufficient holding strength. Always refer to the specific instructions on the urethane adhesive label for open time and tack time. Ensure the correct set up time is utilized prior to installing flooring.

STEP 4: LAYOUT STARTER ROW

Lay one row of plank along the entire length of the working line. Place TONGUE edge of flooring toward the starting wall. The first row must be aligned and seated in the adhesive, as all additional rows will be pulled back to this original row. If you are installing over wood type sub floor, you may use small finishing nails to hold the first row in place. Set and fill the nail holes with latex filler, which is manufactured to blend with your flooring.

STEP 5: INSTALLING FIELD FLOORING

DO NOT slide the planks through the adhesive when placing them in position. Simply place the long tongue into the adjoining long groove as close as possible to the adjoining row and adjust into final position. Planks should be butted to the adjoining plank. A random mix of the various surface-graining configurations is suggested to enhance the natural beauty of the floor. The flooring should be installed from several bundles at the same time to ensure a good color and shade mix. Note: Oil finished flooring may have an occasional piece of separator paper stuck to the finished surface; the paper can be easily removed with a wet rag. Note: When using the Wet-Lay Installation Method, flooring is placed into "wet" adhesive and workers should not walk on the newly installed flooring but work with their feet on the sub floor. On additional rows, it may be necessary to align planks with a cut-off piece of scrap wood. A soft rubber mallet can he used to tap the planks on the edge until they are pulled into proper position. Check for a tight fit between all edges and ends of each plank. End joints of adjacent rows should be staggered a minimum of 8 inches. Care must be taken to avoid getting adhesive on surface Immediately clean up any adhesive on pre-finished flooring with a soft cloth and mineral spirits before drying or curing (Be careful not to harm finish). Woodwright Hardwood Floor Company does not take responsibility for damage to oil finishes by adhesive setting on surface. NEVER USE LACQUER THINNER OR SIMILAR SOLVENTS. Rolling is recommended for all installations. Flooring that is not flat should be tacked, weighted, or rolled to ensure proper contact between the flooring and the substrate. The installer should check for good adhesive transfer throughout the installation to prevent hollow spots. Be sure not to spread the adhesive too far ahead of your work area. It is not recommended to work on the newly installed flooring. If it is absolutely necessary to work on the newly installed flooring, use a kneeler board. The kneeler board will distribute your weight evenly over a wider area. Keep the flooring clean of dust and debris as you work.

DO NOT USE ANY TYPE OF TAPE TO TEMPORARILY HOLD FLOORING IN PLACE DURING INSTALLATION; THIS CAN CAUSE DAMAGE TO THE SURFACE OF THE FLOOR.

STEP 6: FINAL ROW INSTALLATION

When you get to the far wall you may have to cut the width of the final row to fit it against the wall, be sure to leave at least ¼" between the last row and the wall. A larger gap can be used if base shoe or base moldings are being installed as part of the project. Use a "Last Board Puller" to snug the last row of planks with the completed second to last row.

STEP 7: COMPLETE THE JOB

Install any transition pieces that may be needed, such as reducers and nosings. Reinstall your base and/or base shoe moldings. Be certain to nail molding into the wall, not the floor. (Note: All finish pieces should be ordered with the flooring to ensure that they match the finish).

STEP 8: CLEAN UPAND PROTECTING THE NEW INSTALLATION

As you are installing the floor, clean the adhesive residue off the floor with mineral spirits and a clean cloth. Avoid heavy foot traffic on the flooring for at least 24 hours. The adhesive will be fully cured in usually 8-12 hours and should not be covered until then. The floor should be checked for any adhesive once again. Removed adhesive with mineral spirits and a clean cloth before the floor is covered. We recommend covering the floor with Rosin Paper. If heavy trades will be occupying the home, we recommend that plywood or Masonite be placed on top of the rosin paper to prevent the floor from being damaged.

STEP 9: FINAL POLISH PRIOR TO MOVING IN FURNISHINGS SEE

ADDITIONAL INSTRUCTIONS FOR OIL FINISH.

SURFACE TEMPERATURE OF WOOD FLOORING SHOULD NEVER EXCEED 81 DEGREES F, 27 DEGREES C. EXCEEDING THIS TEMPERATURE WILL CAUSE DAMAGE AND VOID AND WARRANTY BY THE FLOORING MANUFACTURER.

RADIANT HEAT SYSTEMS

INSTALL INSTRUCTIONS FOR RADIANT HEAT SYSTEMS

- · Floor Plank widths over six inches are NOT recommended for use over Radiant Heat and will void warranty.
- Warranty coverage may be lost due to failure to follow all installation guidelines and recommendations. READ CAREFULLY before
 installation.
- Warranty WILL NOT cover species such as Maple, Exotics, Hickory or Pecan due to low stability of these woods.
- Woodwright Hardwood Floor Company recommends use of a humidifier and outside thermostat as part of the radiant heat system.
- Woodwright Hardwood Floor Company does not recommend installation of Solid Hardwood floors over radiant heat systems.
- Radiant heat systems require strict compliance of all job-site inspections and start-up of the system.

STEP 1: ADDITIONAL SUB FLOOR INSPECTION AND PREPARATION FOR RADIANT HEAT SYSTEM

The relative humidity at the job-site should reflect normal working conditions. Temperature settings at time of installation should be within fifteen degrees Fahrenheit of these normal living conditions. The heating system must be installed correctly according to the manufacturer's specifications. If installing over a concrete floor, the concrete must have been installed and cured for at least six weeks with no heat transfer during that time. The heating system should then be run at two-thirds of maximum output for a minimum of two weeks to allow any remining moisture to evaporate, attaining the final moisture content without causing any damage. Three or four days before installation, the heating system must be reduced to a suitable temperature (around 65 degrees Fahrenheit). If there are any high spots on the concrete sub-floor, care must be taken not to damage the radiant heat system during leveling.

STEP 2: FLOORING ACCLIMATION

Flooring must be placed in the room of installation and allowed time to acclimate prior to installation. Acclimation time will vary depending on site conditions and can range from days to weeks. See current NWFA guidelines. Per Woodwright standards, a maximum four percent difference in moisture content between flooring and sub-floor is required.

STEP 3: INSTALLATION

The flooring can be either Stapled/ Nailed or Glued down. See above for further installation instructions. Special care must be taken to avoid damaging the radiant heat system during installation.

STEP 4: AFTER INSTALLATION

Approximately two days after installation is complete, gradually (over the period of one week) raise the temperature of the heating system to the desired operating level. Surface temperature of flooring should never exceed 81 degrees F/27 degrees C. Exceeding this temperature will cause damage and void any warranty by the flooring manufacturer.

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