

# Installation Manual

## Installation for Engineered Hardwood Flooring:

### ***Before Installation***

It is the responsibility of the installer/owner to determine if the sub-floor and job site conditions are environmentally and structurally acceptable for engineered hardwood floor installation, the manufacturer declines any responsibility for floors failure resulting from or connected with sub-floor, subsurface, job site damage or deficiencies after engineered hardwood flooring has been installed. The flooring should be delivered to the job-site at least 72 hours before installation. Additional acclimation of 3 to 5 days may be required based upon local climate conditions. The boxes should be opened and in the room to be installed. The heating or air conditioning must be turned on and operating at normal levels so the boards can acclimate to their environment. Do not unload flooring during wet conditions such as rain, snow, sleet, etc. Moisture absorbed by the flooring boards will cause them to swell. If installed before acclimation, they will subsequently shrink back to their in-service moisture content. This shrinkage may produce gaps, which is a natural occurrence. The building must be enclosed and dried out before the installation of the engineered hardwood flooring.

### ***Pre-installation Procedures***

#### ***Job-site Inspection***

##### **INSTALLER/OWNER**

Proper handling, storage, and installation are **your responsibility**. Store in a dry place-flooring must be acclimated to proper conditions before installation. Installer responsibility includes final inspection of flooring prior to installation. Our warranty does not cover flooring with visible defects once it is installed. Installer is also responsible for marking sure the flooring is installed over an acceptable, suitable sub floor.

- Flooring should be one of the last items installed. All work involving water or moisture (plumbing, acoustical ceilings, dry wall, taping, etc) should be completed prior to wood flooring being installed.
- Plastering, painting, and other materials are completely dry. Concrete and plaster should be 60 - 90 days old.
- Relative humidity should be 35 - 55%.
- Inspect all material before installing.
- Remember that wood is a natural product that contains variations in color, tone, and graining. Some variation is to be expected.
- Remove any wood containing visual defects prior to installation, once installed the warranty will not cover the defected material.

### **RECOMMENDED TOOLS AND SUPPLIES**

#### **Recommended Flooring Adhesives**

- Capitol Woody 060
- Mapei ECO 972
- Mapei ECO 975 **For 5" Wide Plank**
- Mapei ECO 980 **For 5" Wide Plank**

#### **Recommended Tools for Staple Down**

- Spot Nail Engineered Flooring Stapler
- Power Nailer, 50C Nailer
- 1" Inch Staple or 1 ½" Power Cleat; using appropriate adaptor

\*Above products are only recommendations. Equivalent adhesives and tools may be substituted.

### ***Installation***

Make sure you have good lighting when installing the floor. This will allow any obvious defects in a board or boards to be easily noticed. Before installation, the installer must be sure that the sub-floor is solid, level, clean, and dry. Proper moisture tests should be performed. The difference between the moisture level of the sub floor and the flooring should be no more than 2%. Always allow 3/4" space for expansion around the perimeter of the room. An expansion space is required when a vertical obstruction such as fireplace, posts, etc. are parallel to the direction of the flooring. Defects can occur in the manufacturing process or naturally as characteristics of the wood itself. Products are manufactured in accordance with accepted industry standards which permit defects of up to 5 - 10%.

## **Shade Variations:**

Flooring, like any natural product, will show variations between boards. It is important to work out of four to five boxes at a time to assure a beautiful blend of shading. The majority of the material should be spread out to compare shades and create a pattern that will enhance these variations in the finished floor. Warranties do not cover color variation, so staggering boards with color differences throughout the floor is important.

## ***Wet – Lay***

### **Step 1: Establishing a starter point**

- Select a starter wall. Start the installation along the exterior wall, measure out from the wall the widths of two planks plus 1/4", and mark each end of the room with a chalk line.

### **Step 2: Adhesive**

- Spread the appropriate adhesive from the chalk line to the starter wall using the recommended trowel. Use the trowel at a 45 degree angle to ensure the proper spread of the adhesive. Improper use of the trowel can cause loose or hollow spots in the adhesive.

### **Step 3: Installing the floor**

- Install the first row of planks with the tongue facing the starter wall. The alignment is important and can be achieved by nailing the first row with finishing nails. This will prevent any movement from the planks that may cause misalignment.

### **Step 4: Completing the job**

- Once the starter row is in place, spread about 2 to 3 feet of adhesive. Never spread more adhesive than can be covered within a 2 hour period.
- Place tongue into groove of plank and/or strip and press firmly to adhere. Never slide the plank through the adhesive. Use a tapping block to fit the planks to fit snug together at side and butt ends.
- Test for proper bond by lifting a board and looking for good coverage then replace it back in the adhesive.
- Use 3M Blue Mask tape to hold planks and/or strips in place as you are installing. Continue the process throughout the installation.
- Never work on top of floor while using the adhesive method.

### **Step 5: Clean up**

- Clean up flooring adhesive as you go. Adhesive that has cured on the surface can be extremely difficult to remove. Once the floor is completed, clean the flooring with the proper flooring cleaner. Light foot traffic is allowed after 12 hours. Wait 24 hours before removing the 3M blue mask tape.

## ***Nailing Methods***

When using the nail down installation, it is necessary to use the proper type of flooring stapler or nailing gun. Flooring can be installed on wood sub-floors at least 3/4" thick. The moisture content of the wood sub-floor at the time of installation should be in the range of 6 to 10 percent. During building construction, before the building is enclosed, the sub-floor may absorb moisture from direct exposure to rain and weather. Sub-floors, which are built with "performance-rated" 3/4-inch thick oriented strand board (OSB) or CDX plywood, will produce the best performing floors. Buildings with crawl space foundations should include a vapor barrier installed between the ground and the sub-floor. This barrier will minimize the effect of moisture evaporating into the crawl space environment that can migrate through the sub-floor and into the flooring. The vapor barrier can be 4 to 6 mil polyethylene sheets lay on the crawlspace floor. Proper air circulation is important to prevent moisture build-up. At least two vents should be left open year round. Furthermore, the building should be completely enclosed with windows and doors installed prior to flooring installation.

## ***Nail Down Installation Procedures***

### ***STEP 1: ESTABLISHING A STARTING POINT***

- Install appropriate HWD15 Underlayment.
- Before beginning actual installation, provide proper layout of flooring by distribution short and long lengths equally over the areas being installed. Flooring should be laid at right angles to the floor joists.
- Floor should be installed from several cartons at the same time to ensure good color and shade mixture. Align the first row of planks to be sure you have a good, straight line from one side of the room to the other. Snap chalk line at the desired distance from the wall to help align the planks. **IMPORTANT:** Leave at least 1/2" for expansion at all vertical obstructions. This space will be covered by base board and a quarter round.

### ***STEP 2: INSTALLING THE FLOOR***

- Align first piece on chalk line. The groove side and end will be facing the starting wall. Be sure to allow 3/4" expansion space. Redrilled holes and drive 7D or 8D cut steel or screw type flooring nails into the face of the board approximately every 12 inches, 1/2" - 3/4" from the edge closest to the starting wall and within 2" - 3" from the ends and in the darker grain of the wood.
- Edge nail the plank by driving the same type nails at a 45 degree angle through the tongue of the plank, spacing the nails every 8" - 10" and within 2" - 3" from the ends. This process should be repeated for each piece in the entire first row. Upon completion of the first row, go back and sink the face nails with a nail punch. If it appears the holes are not to be covered by the baseboard molding, fill the holes with filler, which blends with your pre-stained floor.
- Begin installing the second row by repeating the edge nailing. (Do not face nail as in the first row). **NOTE:** Typically, the first few rows must be edge nailed by hand rather than with a nailing machine due to vertical wall obstruction. When clearance allows, an edge nailing machine, which drives 2' fasteners with an appropriate mallet, can be used to simplify and speed up the nailing process.
- Install each succeeding row of planks by edge nailing the tongue side every 8" - 10" to within 2" - 3" from board ends. Be attentive to staggering the ends of boards at least 6" in adjacent rows to avoid clustering end joints. Upon reaching the last row to be installed, the planks should be ripped to allow a 1/4" expansion space. The last rows must be fastened by face nailing approximately 1/2" - 3/4" from the back edge of the board every 12". The same process of counter sinking the face nails and applying filler should be repeated.

### ***STEP 3: COMPLETE THE JOB***

- Refer to the floor care and maintenance section of this sheet for proper procedures for maintaining your beautiful new floor.
- Clean aluminum oxide finish floors with wood floor cleaner.
- Install any transition pieces that may be needed, such as basic reducer strips, T-moldings, or Baby Threshold. The products are available pre-finished to blend with your flooring.
- Reinstall your base and/or quarter round moldings. Be certain to nail molding into the wall, not the floor.
- Be sure to leave warranty and floor care information with the homeowner. Advise them of the product name and code number of the flooring they purchased.

# WOOD FLOOR CARE GUIDE

- Never wet mop or clean your engineered floor with water. Do not use any wax or cleaner that must be mixed with water such as oil soap, as this may result in a loss of warranty. Water can dull the finish, and permanently damage the floor.
- If your floor abuts exterior doors, put doormats outside at the entrances to keep dirt and moisture from being tracked in. Inside you may want to add an area rug to further prevent dirt and moisture from being tracked onto your hardwood floor. Do not use rubber back or plastic mats as they may discolor the floor. To prevent slippage of area rugs, use an approved vinyl rug underlay from a reputable manufacturer.
- Normal exposure to sunlight will bring about changes in the shading of any hardwood floor as the floor ages. Area rugs should be moved occasionally as they block sunlight and may give the appearance of discoloring the rug. This is not a defect.
- Sweep or vacuum your floor as often as required to remove loose dirt or grit before it can scratch the surface of the floor. Pets' nails can also cause surface scratches and should be kept trimmed.
- Wipe up spills as soon as possible, before they get sticky or dry. Remove dried spills with cloth or scrub pad dampened with "n" strip or professional hardwood floor cleaner.
- Use felt pad protectors on the feet of furniture to avoid scratches.
- Certain types of casters on furniture may damage hardwood flooring. Barrel-type caster wheels or wide flat glides are best for protecting your hardwood floor. If your furniture does not have the right type of caster, we recommend you change them.
- 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. Excessive humidity can also adversely affect your floor. A humidity level of 35 - 55% is recommended.
- In damp conditions, proper humidity levels can be maintained with an air conditioner or dehumidifier, or by periodically turning your heating system on during the summer months.
- Spike or stiletto heel shoes, especially those in poor repair, may cause denting and related damage to hardwood floors due to the extremely high compressive force they generate. Such footwear can produce dynamic loads in excess of 1000 pounds per square inch, even when worn by women of slight or average build. The manufacturer will not accept claims for damages that arise from such exposure.

# ENGINEERED FLOORING WARRANTY

- Your new Engineered Hardwood floor comes with a 15 year residential finished warranty from the date of purchase.
- Engineered hardwood floors are manufactured from natural material, which are not perfect. The warranty covers any manufacturing defects and classification errors, as well as defects in stain and aluminum-oxide finish application.
- This warranty is not transferable: it extends only to the original consumer purchaser. Installation must be according to recommended procedures found in the enclosed installation instructions.
- Maintenance must be according to recommended instructions. Floor must not be exposed to extreme heat, dryness, moisture, water saturation, including wet mopping, and other source of extreme moisture. Damage caused by lack of maintenance or negligence, marks or scratches from heavy blows, furniture, high-heels, house-hold pet's nails, rocks, sand, and other abrasives are not covered under this warranty.
- It is recommended to use felt pads under all furniture legs to prevent scratching. Rugs should put in doorways, high traffic areas and places where water might be a problem.
- Any claim for warranty must be in writing, within 30 days after it has been detected. Direct all claims to the retailer where you bought the product.