

# INSTALLATION INSTRUCTION

## FOR INTERLOCKING ENGINEERED WOOD

Glue or Floating Installation: INTERLOCKING ENGINEERED WOOD can be installed over most clean , dry flat sub-floors, and are engineered to be very dimensionally stable, making them suitable for installation on and above grade levels. (See information and installation guidelines below.)

### ATTENTION – INSTALLER / OWNER RESPONSIBILITY

Inspect “all” materials carefully before installation. Wood is a natural product containing variations in color, tone and graining. Some variation in color is to be expected in a natural wood floor. Beautiful hardwood floors are a product of nature and therefore not perfect. These floors are manufactured in accordance with accepted industry standards, which permit a defect tolerance of 5%. Even though our product goes through many inspections before it leaves the plant, it is the responsibility of the customer and installer to perform a final inspection prior to installation.

Any warranties offered with this product do not cover materials with visible defects once the product is installed.

We strongly recommend that you visit the NWFA website at :[www.woodfloors.org](http://www.woodfloors.org) consumer for installation help and maintenance tips.

### TOOLS

Basic tools and accessories: broom or vacuum, chalk line, tapping block, wood cleaner, hand or electric jamb saw, miter saw, moisture meter, safety glasses, straight edge, table saw, tape measure, sure, utility knife, pry bar and underlayment (for floating installations).

Use urethane wood flooring adhesive, towels and trowel if gluing.

### JOB SITE CONDITIONS

It is the responsibility of the installer/owner to determine if the job site sub floor and job site conditions are environmentally and structurally acceptable for wood floor installation. The installer/owner is responsible for wood failure resulting from or connected with sub-floor, subsurface, job site damage or deficiencies after the hardwood flooring has been installed. See NWFA guidelines.

### SUB-FLOOR PREPARATIONS AND RECOMMENDATIONS FOR ALL INSTALLATIONS

#### Concrete Sub-Floors

New concrete slabs require a minimum of 60 days drying time before covering them with a wood floor.

#### Lightweight Concrete

Lightweight concrete has a dry density of 100 points or less per cubic feet and is only suitable for engineered wood floors when using the floating installation method. Many products have been developed as self-leveling toppings or floor underpayments. These include cellular concrete, resin reinforced cementations, underlayments, and gypsum-based materials. Although some of these products may have the necessary qualifications of underlayment for wood flooring installation, others do not. To test for lightweight concede, scrape a coin or key 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. For glue down applications check with adhesive manufacturer for suitable compression strength.

All concrete sub-floors must be dry, smooth (level with 3/16” in a 10 food radius - 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. 3000 psi).

Concrete must be free of paint, oil, existing adhesives, was grease, dirt and curing compounds. These may be removed chemically or 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 adhesives and concrete and wood panels.

Engineered 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.

#### Wood Sub-floors

Wood sub-floors need to be well nailed or secured with screws. Nails should be shanks and screws need to be counter sunk. The wood sub-floor needs to be structurally sound and dry. It should not exceed 13% on surface and 15% on the exposed crawlspace side 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. Note 6 mil visqueen goes on the ground cover under the house. When fastening the floor use 1 1/2” nails or staples designed to fasten floors with locking mechanism.

Wood sub-floors must be free of paint, oil, existing adhesives, wax, grease, dirt, urethane, varnish, etc. Underlayment grade OSB (not the wax side) is also a suitable sub-floor. Particleboard is not an acceptable sub-floor for staple or nail down installation but can be used as a sub-floor in glue-down installations. When installing over existing wood flooring, install at right angles to the existing floor. Use 15 lb felt between the floor and the sub floor.

#### Sub-flooring Moisture Check

Wood flooring adhesive may be used for above, on and below 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 3 lbs./1000 sq. ft./24 hrs. on calcium chloride test do not proceed.
- Less than a reading 75% RH do not proceed.

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

#### Sub-floors Other Than Wood or Concrete

Note: Perimeter glued resilient vinyl and rubber tiles are unacceptable underlayments and must be removed. Terrazzo, tile and any other hard surfaces that are dry, structurally sound and level, as described above, are suitable as a sub-floor.

### INTERLOCKING ENGINEERED HARDWOOD FLOORING INSTALLATION

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 abraded to assure adhesion. Warning! Do not sand existing resilient tile, sheet flooring, backing or felt linings. These products may contain asbestos fibers that are readily identifiable. Inhalation of asbestos dust can cause serious bodily harm. Check with local, state and federal laws before handling hazardous material and before attempting the removal of these floors.

#### Radiant Heated Sub-floors

Before installing over a radiant-heated floor turn heat and wait until the floor has reached room temperature. After installing the floor return the heat to the previous setting, slowly 2° at a time. Caution: The slab surface must never exceed 85° F. in temperature.

#### Preparation

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

#### “Racking the Floor”

Start by using random length strips from the carton or by cutting four to five strips in random lengths, differing by at least 9”. As you continue working across the floor be sure to maintain the 9” minimum stagger between end joints on all adjacent rows. Never waste material; use the left over pieces from the cuts to start the next row or to complete a row. Joint close together can cause squeaking.

**Note:** When installing a pre-fished wood floor be sure to blend the wood from several cartons to ensure a good grain and shading mixture throughout the installation.

### GLUE DOWN INSTALLATION GUIDELINES

There are several ways to install using a glue down method such as wet lay or tacked. Only use adhesives that contain no water. i.e. Urethane or MS Polymers **Caution:** it is important to follow all guidelines set by the adhesive manufacture for the glue down method you choose. By not adhering to the guidelines you can void your flooring warranties.

#### Step 1:

Select a starter wall. It is recommended to start the installation along an exterior wall; its more likely to be straight and square with the room. Measure out from the wall the width of two strips plus 1/4” and mark each end of the room and snap your chalk line.

#### Step 2:

Spread adhesive from the chalk line to the starter all using the adhesive manufacturer’s recommended trowel. It is important to use the correct trowel at an angle to get the proper spread of adhesive applied to the sub-floor, which will produce a proper and permanent bond. Improper bonding can cause loose or hollow spots. Note: Change the trowel every 2000 to 3000 square feet due to wear down of the notices. This assures you always get the proper spread of adhesive.

#### Step 3:

Install the first row of starter strips with the tongue facing the starter wall and secure into position. Alignment is critical and can be achieved by top nailing the first row with finished nails (wood installation instructions: engineered floor sub-floor), or sprig/pin nails (concrete sub-floor). This prevents slippage of the strips that can cause misalignment. **Note:** The strips along the wall may have to be cut to fit since most walls are not straight and leaving an expansion space is not necessary with engineered wood strips installed with the glue-down method.

#### Step 4:

Once the starter rows are secured, spread 2 1/2 to 3 feet of adhesive the length of the room. (Never lay more adhesive than can be covered in approximately 2 hours.) Place the tongue into the groove of the strips and press firmly into adhesive. Never slide strips through adhesive.

Test for proper bond by occasionally lifting a board and looking for good coverage (90%) and then replace it into the adhesive. Clean any adhesive off the surface before it cures using water. Use mineral spirits after it cures.

INTERLOCKING FLOATING INSTALLATION

All flooring installations must use an approved underlayment. In a floating installation, a 1/2” expansion gap must be maintained around the perimeter of the room. Do not exceed 25 linear feet in any direction without adding additional expansion gap.(See corresponding photos below for a step-by-step illustration of the following floating installation instructions.)

After allowing the floor to 48 hours to acclimate (Step 1) and ensuring that proper sub-floor requirements are met (Step 2), you can begin the installation by laying the underlayment (Step 3). Use proper underlayment for raised wood frame houses that breathes and has no visqueen attached. On raised wood frame house visqueen goes on the ground cover under the house. On concrete slab underlayment just have 6 mil visqueen attached. As you lay the first plank, use spacers to maintain the minimum 1/2” expansion gap around the perimeter of the room (Step 4). Then lay the butt seams onto each other for the first row, using a bead of glue at the end seams as needed (Steps 5-7).

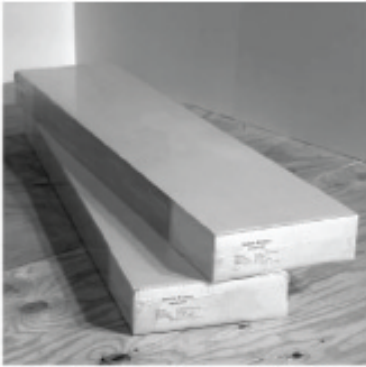
The cut piece from the first row (which is at least 9” long) will be used to start the second row (Steps 8-10). Be sure to always stagger the end seams a minimum of nine inches this reduces squeaks

To begin the second row, place the tongue of the cut piece into the groove and lock down into place (Step 11). Place the second board of the second row into the groove and lock down into place. The butt seams will be held down by the following rows. It is only necessary to glue the end seams within the first and last row of the installation.

The last row will be cut to fit (Step 12) and should be wider than two inches. The end seams of the last row should be glued (Step 13).

Final touches:

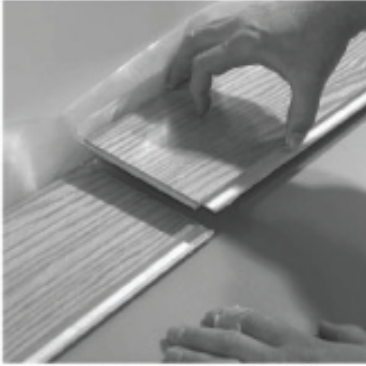
Install the proper trim molding at the doorways to achieve the transition and along the walls to cover the edges of any gaps along the wall due to irregularity. Note: Match the moldings to flooring before laying the floor. This gets a closer color match at transitions.



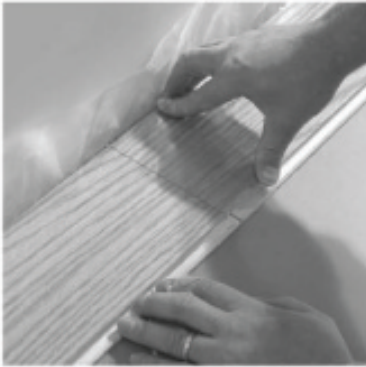
1. Allow flooring to acclimate to the installation room’s temperature.



3. Roll out the underlayment, a few rows at a time to prevent tearing.



5. Line up the end of the second board with the first.



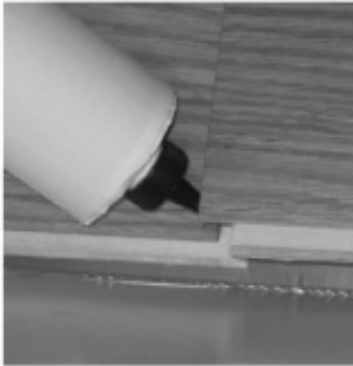
7. Drop second board into place ensuring that the seam is tight.



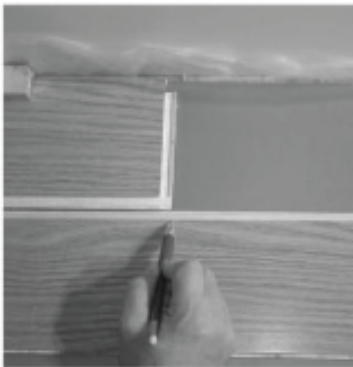
2. Make sure the floor is level and dry.



4. Start in corner positioning first board with 1/2” expansion spacers.



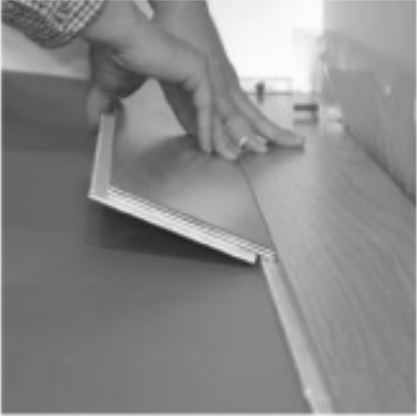
6. Place a bead of glue at all end seams as needed.



8. Place boards tongue to tongue an mark the cut line as shown.



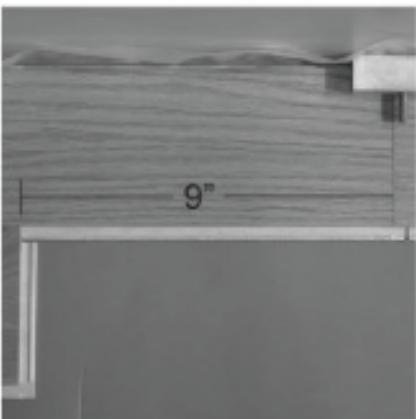
9. The cut board from the first row is used to start the second row.



11. Position second row board at an angle and push down into place.



13. Place a bead of glue on the end seams of the last row.



10. Maintain a minimum 9” stagger throughout installation.



12. Measure cut line for last row, allowing for 1/2” expansion.

MAINTENANCE

ENGINEERED HARDWOOD FLOORS are very easy to maintain. Simply use a wood cleaner and a speciality terry cloth flooring duster, which is available from most flooring retailers. NEVER WET MOP OR USE A STEAM MOP ON YOUR WOOD FLOORS.

STEP 1: Vacuum or sweep your floor to remove any particles that could scratch your floor. **Warning:** Vacuums with a beater bar or power rotary brush head can damage a wood floor and should never be used.

STEP 2: Apply the specialty wood cleaner directly to the terry cloth flooring duster, not to the floor!

STEP 3: Use a back and forth motion with the duster. When the terry cloth cover becomes soiled, simply replace it with a clean one. Cleaning the floor with a soiled cover could cause streaking. The covers are reusable so simply throw the cover in the wash and dry it as you would any trowel.

Tips & Warnings:

- Never wet or damp mop or use a steam mop on your floors. Water can damage them.
- Vacuum or sweep regularly.
- Remove spills promptly using a wood cleaner and a clean white cloth.
- Use felt protectors under heavy pieces of furniture and chairs
- Use protective mats at all exterior entrances.
- Spiked heels should not be worn on hardwood floors and shoes in need of repair can damage your floor.
- Never use oil soaps, was or other household products to clean your floor.
- Wood is a natural product that is affected by the sun. Expect that over time the sun’s UV rays can change the color of your floors.
- Keep animal nails trimmed.
- Protect your floor when using a dolly for moving furniture or appliances. Never slide or roll heavy furniture or appliances across the floor.
- If your floor becomes scratched or dull, repairs can often be made using repair accessories.
- Match moldings to flooring before laying the floor. This gets a closer color match at transitions.
- Add additional expansion gaps if floor exceeds 25 running fetid any direction.
- Install t-molds at all doorways
- Do not lock the floor with heavy object that might restrict the floors movement i.e.: entertainment centers, bars, or kitchen islands.