Engineered Hardwood Flooring
Installation Instructions

Attention - INSTALLER/OWNER RESPONSIBILITY

This engineered flooring can be installed over most sub-floors, and is engineered to be dimensionally stable, making it suitable for installation over all grade levels. See all information and installation guidelines below.

Inspect ALL materials carefully BEFORE installation. Wood is a natural product containing natural characteristics such as 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. NOVA warranties DO NOT cover materials with visible defects once they are installed.

TOOLS

Basic tools and accessories required: broom or vacuum, chalk line, tapping block, hand or electric jam saw, meter saw, moisture meter, safety glasses, straight edge, table saw, tape measure, blue tape, square, utility knife, pry bar. Use Professional's Choice urethane wood flooring adhesive, towels and trowel if gluing or, if nailing/stapling, we recommend a powernailer; use a 20 gauge E POWERCLEAT from POWERNAIL.

Powernail recommends a Model 200 Pneumatic Tongue and groove Powernailer equipped with BA adapter plate, or a Model 250 manual.
Caution: Improper use of a power nailer can mark the surface of the flooring.

JOBSITE CONDITIONS

NOVA requires that this engineered hardwood flooring 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.

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. NOVA declines any responsibility for wood failure resulting from or connected with sub-floor, subsurface, job site damage or deficiencies after hardwood flooring has been installed.

SUB-FLOOR PREPARATION AND RECOMMENDATIONS FOR ALL INSTALLATIONS

Concrete Sub-Floors
New concrete slabs require a minimum of 60 days drying time before being covered with a wood floor.

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 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.

Concrete sub-floors must be dry and smooth (level within 3/16" in a 10 foot Radius – within 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 PSI). 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 planks or strips. NOVA 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 ring shank and screws need to 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 ¾" 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. Particleboard is not an acceptable sub-floor for staple or nail down installations 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.

Sub-Floor Moisture Check

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 3lbs/1000 sq ft/24 hrs, based on a calcium chloride test.
- Less than a reading of 5.0 on a Concrete Moisture Counter (moisture meter).
- Wood Substrates must have a moisture reading of less than 14% when using an 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.

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 for NOVA 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 scuffed to assure 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, state and federal laws for handling hazardous material before attempting the removal of these floors.

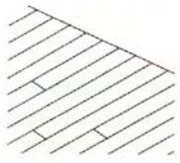
Radiant Heated Sub-floors

Before installing over a radiant-heated floor, turn off heat and wait until the floor has reached room temperature. After installing the floor return the heat to the previous setting.

Caution: The slab surface must never exceed 85° F in temperature.

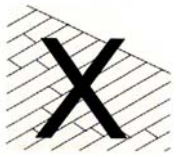
PREPARATION

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



"Racking the Floor"

Whether your 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 the left over pieces from the fill cuts to start the next row or to complete a row.



Note: 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.

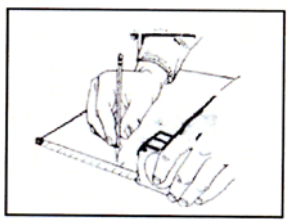
GLUE DOWN INSTALLATION GUIDELINES

There are two ways to install when using Professional's Choice adhesive (wet lay meaning to lay directly into wet adhesive and dry-lay method meaning to allow the adhesive to flash or to tack up.)

Caution: Whether you choose to install using the dry or wet method follow all guidelines set by the adhesive manufacturer as well as NOVA. By not adhering to the guidelines you can void your flooring warranties.

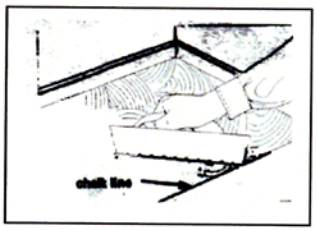
Step 1—(Wet Lay Method)

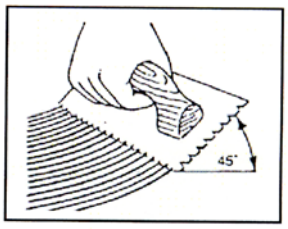
Select a starter wall. It is recommended to start the installation along an exterior wall; it's more likely to be straight and square with the room. Measure out from the wall the width of two planks and mark each end of the room and snap your chalk line.



Step 2

Spread Professional's Choice Flooring Adhesive from the chalk line to the starter wall using the recommended trowel (3/16"x1/4"1/2"v notch). It is important to use the correct trowel at a 45° 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 notches. This assures you always get the proper spread of adhesive.

Step 3

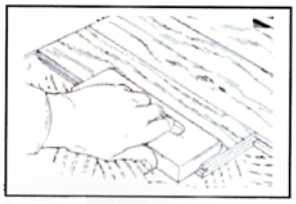
Install the first row of starter planks with the tongue facing the starter wall and secure into position. Alignment is critical and can be achieved by securing a straight edge along the chalk line (2'x 4's work well), or by top nailing the first row with finishing nails (wood sub-floor), or sprig/pin nails (concrete sub-floor). This prevents slippage of the planks that can cause misalignment.

Note: The planks 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 NOVA Floorings engineered planks and strips.

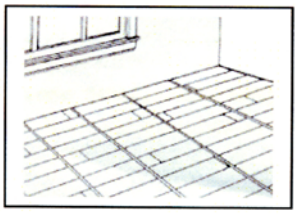
Step 4

Once the starter rows are secure, spread 2 ½ to 3 feet of adhesive the length of the room. (Never lay more adhesive than can be covered in approximately 2 hrs.)

Place tongue into groove of plank or strips and press firmly into adhesive. Never slide planks or strips through adhesive. Use a tapping block to fit planks snug together at side and butt ends.



Clean any adhesive off the surface before it cures using clean terry cloth towels and Professional's Choice Urethane Remover.

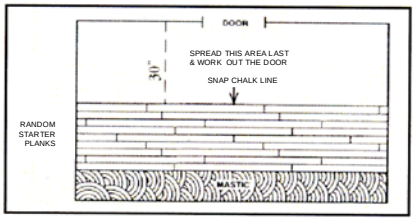


Use Blue Mask Tape to hold planks securely in place as you are installing and continue the process throughout the installation. Use caution when using a rubber mallet to butt material together, as it can burn the finish and cause marring.

Note: Never work on top of the flooring when installing with the wet lay method.

Step1—(Dry Lay Method)

Start by selecting your starter wall and measure out from the wall 30" when installing 3" or 5" planks. This will allow



adequate working space. Snap chalk line.

Step 2

Apply adhesive from the chalk line out 2 ½' - 3'. Allow adhesive to flash as per the instructions affixed to the top of the adhesive container. The humidity chart will aid in allowing the appropriate flash time based on the temperature and humidity.

Secure your starter rows with a straight edge (2'x4's). Install planks and secure with tape as you continue throughout your installation. If you must work on top of the newly laid flooring use a kneeling board.

Once the remainder of the floor has been installed, go back to the beginning and remove straight edges and spread adhesive on the remainder of the open sub-floor. Allow to flash for the appropriate time and lay flooring as instructed. Remember that the planks closest to the wall may need cutting to fit, due to irregularities along the wall. When using Professional's Choice Flooring Adhesive it is not necessary to roll the floor.

Clean Up

Use clean white terry cloth towels to clean as you go, along with mineral spirits. Both are easy and convenient to use. Adhesive that has cured on the surface of the flooring can be difficult to remove and will require the use of a urethane remover. This product has been recommended by the adhesive manufacturer and is safe for the finish of your pre-finished floor.

Light foot traffic is allowed after 12 hours but wait 24 hours after installation to remove the blue masking tape. Once the tape is removed clean any adhesive residue left from the tape.

STAPLE OR NAIL DOWN INSTALLATIONS

NOVA FLOORING may be installed over wood sub-floors using staples or nailing cleats.

When installing NOVA FLOORING planks or strips by nailing or stapling, it is necessary to use the proper type of flooring stapler or nailer.

Recommended Staplers and Nailer

When nailing/stapling, use a 20 gauge, 1" or 1 ½" staple, with a Powernailer**.**

Step 1

You must staple or nail 1"-2" from the ends and every 4"-6" along the edges. This will help insure a satisfactory installation. It is best to set the compressor PSI at 80-85lbs. to keep the staples from going through or breaking the tongues. Improper stapling techniques can cause squeaks in the floor.

Adjustments may be necessary to provide adequate penetration of the nail or staple into the nail bed. You want it flush in the nail pocket. Use a scrap piece of flooring material to set tools properly before installation.

Before installation of the engineered flooring begins, install a 6-mil polyethylene layer over the sub-floor. This will retard moisture from below and may help prevent squeaks. Keep in mind there is no complete moisture barrier system for staple or nail down installations.

Note: 15 lb roofing felt or resin paper may be substituted for the polyethylene and installed as below.

Installing 6-mil Polyethylene

Install the polyethylene parallel to the direction of the flooring and allow a 3" overhang at the perimeter. Make sure each run of polyethylene overlaps the previous run by 6" or more.

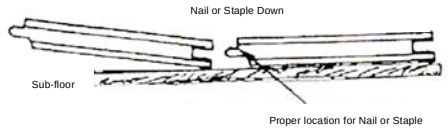
Layout the Job

Measure out from the ends of your starting wall, 3 ½" when installing 3" planks, 5 ½" when installing 5" planks, and mark both ends. Where possible, lay the flooring at 90° angles to the floor joists. Make a chalk line along the starting wall using the marks you made.

Beginning installation

Note: Expansion space is required along the perimeter of room(s) of intended installation. Expansion space is dictated by the thickness of the product. For example, 3/8" thick floor requires 3/8" expansion space.

Place the planks with the tongue facing away from the wall and along your chalk line. Use brads or small finishing nails to secure the first starter row along the wall edge 1"-2" from the ends and every 4"-6" along the side. Counter sink the nails and fill with the Professional's Choice Filler that blends with the flooring installed. Place the nails in a dark grain spot in the board. The base or shoe molding will cover the nails when installed after completion of the installation.



Blind nail at a 45° angle through the tongues. It will be easier IF YOU PRE-DRILL THE HOLES IN THE TONGUES. Nail 1"-2" from the ends and every 4"-6" along the sides. It will be necessary to blind nail the next 2 rows.

Continue the installation using an engineered wood flooring stapler, using staples or nails recommended by NOVA. Nail or staple the flooring 1"-2" from the ends and every 4"-6" along the edge tongues.

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.

Complete the job by using Professional's Choice Flooring Filler that blends with the installed flooring to fill any gapping along the joints, and clean the finished floor with Professional's Choice Flooring Cleaner.

INSTALLING AS A FLOATING FLOOR

Only engineered styles with 5 plies or more *are approved for floating installation*.

Sub-Floor Preparation:

Sub-floor preparation is more critical for a floating engineered floor than for a staple or glue down application. The floor must be flat to 1/8" in 10'. If the floor requires correction the high areas can be ground down and the low areas may be filled by floating latex fortified Portland leveling compound. The leveling compound must be allowed to dry according to the manufacturer's instructions before the floor is installed over it. The use of sand or extra padding to fill low areas is not acceptable.

Underlayment:

Underlayment requirements are very critical in a floating installation. Excessive pad compression or compaction is a common cause of seam failure.

Expansion Space:

An expansion space of at least ½ inch must be maintained around the perimeter of the room, all pipes, counters, cabinets, fireplace hearths, door frames and any other fixed vertical objects in the room.

Glue and Glue Placement:
Glue placement is very important. The glue must be placed along the topside of the groove the full length of the grooved side and end. This can be accomplished by inverting the plank and applying a bead of glue (3/32") to the topside of the groove (side of the groove nearest the face of the plank). When the plank is turned back over the glue will run down the back of the groove giving total coverage. Apply only a 3/32" bead of glue. If the groove is filled with glue it will be difficult to close the seam not allowing a tight fit.

Getting Started:
The installation begins with three rows of flooring glued together and held in place with blue painters tape with the groove side facing the wall. Spacers must be used to establish the minimum ½" expansion space from the walls. These three rows must be straight, square and in rack because they establish the alignment of the rest of the floor. After putting these three rows together allow the glue to set (15 to 45 minutes) before proceeding with the installation. With the tongue facing out the planks can be tapped together with a tapping block on the tongue to make a snug fit. After installing 8 or 10 rows of flooring, stand back and check for crowning or heaving due to tension strapping or any damage caused by improper tapping.

Clean AS YOU Go:
If any glue squeezes out of the seam between the planks allow it to dry for 10 to 15 minutes and then lightly scrape it away with a plastic scraper or putty knife. Any glue left may be cleaned with a damp cloth or other method recommended by the adhesive manufacturer. Do not allow the glue to dry on the face of the flooring; it will be very difficult to clean off.

Warranty:
Warranty of separation of planks is the responsibility of the flooring mechanic, provided there is no glue failure. Glue failure is the responsibility of the adhesive manufacturer.

MAINTENANCE

NOVA engineered hardwood floors are very easily maintained. No wax, no mess. Simply use hard surface floor cleaner and a terry cloth flooring mop.

STEP ONE: 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 never should be used.

STEP TWO: Apply the hard surface cleaner directly to the terry cloth flooring mop, not to the floor!

STEP THREE: Use a back and forth motion with the mop. 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 re-usable so simple throw the cover in the wash and dry it as you would any towel.

Tips & Warnings:

- Sweep regularly.
- Remove spills promptly using a hard surface floor 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 or shoes in need of repair can severely damage your floor.
- Never wet or damp mop your wood floors. Water can cause damage to wood flooring.
- Never use oil soaps, wax, liquid or other household products to clean your floor.
- The sun's UV rays can change the color of your floor.
- 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.