

INSTALLATION INSTRUCTIONS FOR LAMINATE FLOORING

Introduction

Laminate flooring is designed to be a floating floor that may be installed over virtually any type of sub floor. It is not nailed or glued to the sub floor. Instead, a glueless system with an extremely strong and durable tongue and groove “locking” system creates a beautiful, stylish floor to be enjoyed as soon as the installation is complete.

Just as all materials in the home expand and contract, laminate floors react to the changes in temperature and humidity. To allow the planks to adjust to the environment where they will live, acclimation is necessary and important. To acclimate, place unopened cartons of planks flat on the floor in the room where they will be installed at least 3 feet away from outside walls and heating/air conditioning vents for a 48 hour minimum prior to installation. Maintaining temperatures between 60 – 85 degrees Fahrenheit and a 35% - 65% relative humidity level provides a comfortable, healthy environment for people as well as the new flooring.

Because this is a “floating floor”, a minimum ¼” expansion space must be left around the entire perimeter of the room and any fixed objects to allow for movement. **FAILURE TO MEET THESE REQUIREMENTS CAN RESULT IN BUCKLING AND OTHER PROBLEMS!** Laminate floors offer a wide variety of coordinating moldings and transition pieces to cover the ¼” expansion space at walls, doorways and transitions to other flooring.

Some laminates have an attached foam underlayment on the planks while others require the installation of a separate underlayment.

When installing over any concrete subfloor, a moisture/vapor barrier must be installed first, if not already incorporated in the product.

Laminate flooring is intended for indoor use only.

Make sure you have all the appropriate installation tools and materials:

Essential Tools and Materials

Laminate Flooring

Underlayment

Manufacturers approved vapor retarder (for concrete substrates)

Spacers

Hand saw or power saw (Carbide tipped blade)

Tape measure

Utility knife

Hammer

Pull bar

Masking tape

Manufacturers approved wood glue

Calculator

Jigsaw

Dust pan and broom

Undercut saw

String line or 8 ft. straight edge

Pencil or marker

Spade bit (SpeedBor)

Safety glasses

Recommended

Chisels or pocket plane

Rasp or file

Pry bar

12" Speed Square

Vacuum Cleaner

Floor patch material

Knee Pads

Trowel and mixing bucket

Floor Sander

Concrete grinder

General Sub Floor Requirements:

The sub floor surface must be flat. Flat means no low spots or ridges more than allowed by the manufactures instructions.

The sub floor must be structurally sound and clean of debris.

The sub floor must be dry. (See specific requirements for wood and concrete below)

Patching compounds must be allowed to dry thoroughly before proceeding with the installation.

Laminate flooring can be installed above, on or below grade.

Do not install laminate flooring in rooms with a sump pump or floor drain.

All sub floors must be checked for moisture. (See section on Moisture Testing)

Concrete sub floors

New concrete must cure for at least 60 days.

All slabs must be flat to within manufacturer's recommendations.

Cover all concrete sub floors with a manufacturers approved vapor retarder.

Overlap all joints 8" and install from wall to wall.

Slabs on, above, or below grade, and lightweight concrete need a vapor retarder.

Existing sheet vinyl, VCT, LVT, ceramic tile, and terrazzo installed over concrete require a vapor retarder and must met flatness requirements.

Any existing wood flooring glued to concrete must be removed prior to laminate installation.

Carpet and pad must always be removed prior to laminate installation.

Any floating must be removed.

Wood sub floors

Wooden sub floors must be constructed according to local building codes, be structurally sound and deflection free.

Repair any squeaky floor prior to installation.

Sand or plane high spots.

Fill all low spots with Portland cement based patching compound.

Floor patch applied according to the manufacturer's recommendations is a good choice to fill low spots.

It is not necessary to use a vapor retarder on top of a wooden sub floor.

Wooden sub floors constructed over a crawl space must have adequate ventilation, 1.5 sq. ft. per 100 sq. ft. of floor space. The ground or concrete must be covered with a manufacturers approved vapor retarder to prevent damage due to excessive water vapor emissions. Overlap joints 8” and cover the entire crawlspace.

Basement walls and floors must be dry to prevent damage due to excessive water vapor emissions into the wooden sub floor overhead.

The moisture content of a wood sub floor must not exceed manufacturer’s recommendations.

Moisture Testing:

A manufacturers approved moisture test is recommended over all concrete sub floors, and wood sub floors constructed over a crawl space or basement. Be sure to record the test results in a reliable manner for future reference.

Wood sub floors

The maximum acceptable moisture reading for wood sub floors is 14%. A Tramex Moisture Encounter Plus MEP is a non destructive meter that measures the moisture content of a wood sub floor.

Concrete sub floors

The maximum acceptable moisture reading for concrete sub floors must not exceed the manufacturer’s recommendations. Some manufacturers accept a meter reading and some require a Calcium Chloride Test.

The Calcium Chloride Test defines the water vapor emission rate of a concrete sub floor. The maximum emission rate for laminate flooring varies from product to product.

The tests must remain in place undisturbed for 60 – 72 hours before harvesting and weighing.

Follow the manufacturers test procedures precisely to obtain an accurate result.

Refer to ASTM E 1869 for complete testing procedures.

Room Preparation:

Be sure the room has the correct temperature and relative humidity for installing laminate flooring, as specified by the manufacturer.

Remove existing quarter round. For a beautiful finish replace old quarter round with color co-coordinating laminate finish quarter round.

Remove carpet, padding, and tack strip. Wood or parquet glued to concrete must be removed.

Undercut all door frames. Extend undercut approximately 1" beyond the door frame. (Quarter round will cover where wall base or drywall has been undercut).

Flatten sub floor as described in section on "General sub floor requirements".

Repair wood sub floors to eliminate squeaks or deflection.

Sweep or vacuum up all debris and foreign matter.

Roll out a vapor retarder from wall to wall, as specified in the manufacturer's installation instructions

If required, roll out a suitable underlayment. Roll out additional underlayment as the floor is installed.

Installation:

Layout the first row. It is an accepted industry practice to begin and end each row with a plank at least 8" long.

For plank designs, measure the width of the room and divide by the width of one plank. If the remainder is 2 ½" or less, cut down the width of the first row to allow the last row to be more than 2 ½" wide.

For tile and slate designs the width and length of the planks in the first and last rows should be balanced.

To balance the width of a pattern in a room, add the width of the last row to the width of a full plank and divide by two. The answer is the width of the first and last row. For example, if the last row is 5" wide, add 5" to width of the plank, in this case 11 ½" to get 16 ½". Divide by two and get 8 ¼" which is the size to cut the first and last row.

The same formula will work for the length, however it may be easier to lay out as many full length planks as possible and physically center them from end to end.

If the starting wall is uneven, scribe or draw the contour of the wall on the planks and cut along the pencil line. Remove the small tongue from the end of the first plank in the first row.

End joints on adjacent rows must be staggered according to manufacturers recommendations.

When possible, install planks perpendicular to the source of light.

Maintain a minimum $\frac{1}{4}$ " expansion space with spacers.

Whenever possible, use the cut pieces from the opposite wall to begin the next row or another row. Stagger end joints according to manufacturer's recommendations.

Start the installation in a corner of the room and work left to right, or visa versa, according to the manufacturers plank configuration.

Trim the first row as per the above instructions or if starting with a full plank or tile cut off the extended profile sides of the plank that will be against the wall. Run this trimmed edge parallel to the starting wall using expansion spacers. Keep the corners of the planks in the first row perfectly aligned.

For most installations, especially tile or slate installations, the best visual effect is obtained by mixing planks from different boxes (preferably 4 or 5 boxes) during installation. Bear in mind that the width of the joint between the tiles on each strip varies. Using planks from various boxes and placing thin joints next to thick ones gives a more natural look. Aligning grout lines lengthwise and crosswise in a room is recommended.

When you reach the end of a row, measure and trim the last plank to fit. Remember to leave a minimum $\frac{1}{4}$ " expansion. A sharp carbide tipped blade with 60 or more teeth cutting into the decorative surface will avoid chipping. Use the remainder of the cut plank to start the next row if it is more than 8" long. (Does not apply to tile or slate installations).

To install flooring around pipes, drill a hole in the plank $\frac{1}{2}$ " larger than the pipe diameter. Cut the plank across the center of the circle, position on the floor and glue the plank pieces back together. (Do not glue laminate to the sub floor). Cover expansion gaps with molding or pipe rings when the floor is complete. All pipes require silicone sealant in the expansion space.

To replace any planks that may have been damaged, simply raise the last installed board approximately $1\frac{1}{4}$ " until it disengages. Replace and reinstall the planks. Do not engage and disengage more than three times.

Cutting the Last Row:

Place a full row of planks directly on top of the last installed row of planks. Use the full width of a scrap piece of plank. Place the tongue side against the wall and a pencil against the extended groove and mark a line the length of the wall. Cut along the pencil line. Leaving the tongue and groove on the scrap piece will automatically allow for the $\frac{1}{4}$ " expansion space needed.

Bathroom Installation:

Most laminate flooring is resistant to water and may be installed in a bathroom; however, it is very important to prevent water or moisture from getting under the flooring. Remove the toilet before installing the laminate flooring. Seal all expansion spaces including around the toilet flange and any pipes with mildew resistant 100% silicone sealant.

Kitchen Installation:

When installing laminate flooring in a kitchen all expansion spaces subject to moisture or plumbing leaks must be sealed using a mildew resistant 100% silicone sealant. Fill the expansion space in front of the sink and dishwasher, around the refrigerator and icemaker, exterior door/s and any other area subject to flooding. It is recommended that kitchen cabinets be installed prior to installing laminate flooring. Install the plank up to the kick plate of the cabinets, leaving a minimum $\frac{1}{4}$ " expansion space. Cover the expansion space with a quarter round molding.

Laundry Room Installation:

All expansion spaces in a laundry room **MUST** be filled with sealant including all exterior doors.

Laminate flooring must not be installed if the laundry room has a floor drain or sump plum.

The expansion space around the perimeter of the laminate floor must be ¼” wide and sealed prior to installing the wall trim. The expansion space must be completely filled with sealant to avoid water getting underneath the flooring. When laminate flooring is installed in a laundry room and an adjoining hall or room, a T-molding must be installed in the doorway between the rooms or hallway, and the expansion space under the T-molding must be filled with mildew resistant 100% silicone sealant.

Radiant Heat:

Most laminate flooring can be used in combination with many types of in-floor heating. The heating system can be cast in a concrete floor or in a thin layer of filler on the surface of a concrete subfloor. It can also be installed under a wood subfloor or installed on the surface of a subfloor as matting. Follow the instructions from the supplier of the floor heating system. The heating system must be in operation for at least 2 weeks prior to the installation of laminate flooring. The system may be turned off or set to a suitable installation temperature (65 – 72 degrees F.) After installation, the temperature may be increased slowly at the rate of approximately 5 degrees per day, and should not exceed 85 degrees F. Follow the instructions from the manufacturer of the floor heating system that do not conflict with the above requirements.

Installing Laminate Flooring on Step Down or Stair Tread

Applications:

Prior to beginning the installation, any loose or damaged treads or risers should be repaired or replaced. Any loose paint, debris or old adhesives must be removed prior to installation.

Step Down from a Floating Floor

Cut the stair nosing to the desired length and attach to the sub floor as per manufacturer’s instructions. A ¼” expansion space must be maintained

beneath the stair nosing and the floating floor. Insert the stair nose in place per manufacturer's instruction.

Staircases

Cut the stair nosing to the desired length and attach to the sub floor as per manufacturer's instructions.

Tread Flush or Even with Riser

The riser must be installed before the nosing is fit into place. If installing from a floating floor, follow the above instructions. When installing on a stair tread, the nosing will be installed after the tread and riser are glued into place.

Tread with an Extended Round Edge Nosing

Cut off the rounded portion of the extended nosing. Do not cut off the entire extended nosing. Glue a narrow strip of laminate on the edge of the squared nosing to finish the exposed edge of the tread. Install the tread and the riser and finish the edge with a stair nosing.

Tread with an Extended Square Edge Nosing

On this style of tread, simply cut a narrow strip of laminate and glue it on the edge of the existing tread. Install the tread and the riser and finish the edge with a stair nosing.

Laminate on Stair Treads and Risers

Cut the laminate planks net from side to side, no expansion space is necessary. Remember that the depth of the laminate tread material will be cut to accommodate the width of the laminate nosing which overlaps either a riser of laminate or the piece of laminate which is glued to the edge of the step. One plank of laminate will finish most risers; if two planks are needed to accommodate the depth of the tread, position the joint close to the riser. After dry fitting the treads and risers, start with the bottom riser and install each step until the last top riser is installed. Start with the top riser and install each step until the last bottom riser is installed. Use a premium

urethane adhesive to adhere the treads and risers. Install quarter round where the tread meets the riser if needed.

Allow the recommended amount of time for the adhesive to fully set up before using the stairs.

A stair application is the ONLY time that a laminate floor is glued directly to a substrate. Laminate flooring must be installed as a floating floor for a step down and all other applications.

Transition Molding:

Transition moldings are used to give a finished appearance to laminate installations. This includes laminate-to-laminate, laminate to other flooring materials, and laminate to fixed objects or vertical surfaces. Transition moldings come in many different widths and lengths.

T-molding

T-molding joins laminate flooring to laminate flooring where recommended by the manufacturer. They also may be used to other Hard Surface flooring of EQUAL height such as ceramic tile, hardwood, vinyl, or other resilient flooring installed over underlayment.

Carpet Transition

Carpet Transitions and moldings are to be used where laminate flooring meets a carpeted floor. T-molding should NOT be use to transition laminate to carpet.

End Molding

End molding finishes laminate flooring at sliding doors, exterior door thresholds, and other vertical surfaces not receiving wall base or quarter round.

Reducer

Reducer transitions laminate to a lower hard surface floor such as vinyl, wood, or tile.

Stair Nose

Stair Nose is used to finish stair edges or step down applications.

Repairing Minor Damage to Laminate Floors:

Minor damage to the floor such as a small chip or nail or screw hole in wall trim can be easily fixed or filled with finishing putty. A neat repair is easy to accomplish by using a small sharp chisel or knife to clean up the edges of the damaged area. Surround the damaged area with scotch tape before applying the finishing putty with a new plastic spatula. Once applied, remove the tape and allow to dry thoroughly.