

# INSTALLATION GUIDE

HARDWOOD ENGINEERING GLUED, NAILED, OR GLUED AND NAILED.

## Introduction

Please read all instructions carefully before you start laying the floor. Improper installation may void the warranty.

## Product Specifications

Laminated flooring can be installed on first floors, ground floors or basement. It is also possible to install most types of wood on top of a subfloor with a radiant heating system with the exception of Brazilian Cherry [Jatoba / Koubari] and Cumaru. Their composition allows them to be glued to wood subfloors or concrete, or stapled to plywood with a stapler for hardwood floors. Use appropriate products to seal the slab (Bostik or other product).

## Responsibility of the installer and owner

Before installation, the installer and the owner must ensure that the work environment and subfloor meet or exceed the minimum specified requirements in this installation guide. The industry provides a margin of error of 5% for natural imperfections and manufacturing defects. Before installation, the installer and the owner must make final inspections of the grade, color, manufacturing quality and finishing wooden planks to ensure that the floor is to be installed in accordance with the product purchased. Every plank installed will be considered accepted by the installer and owner, whether the latter is present or not at the time of installation. You should take into consideration the losses from cuts during the installation process. Add an additional 5% for 2¼" & 3¼" cuts, 6% for 4½" cuts, 8% for 5" cuts, 10 to 12% for 6" to 8" cuts.

## Maintenance and prevention

For information on the maintenance of the floor, our guide on our website:

[www.americanwideplankflooring.ca](http://www.americanwideplankflooring.ca)

## Tools

### Recommended tools and accessories

- Vacuum or broom
- Scraper
- Leveling bar
- Level
- Leveling compound [if needed]
- 20 grit sandpaper [if needed]
- Wood moisture tester [and concrete if necessary]
- Miter saw
- Handsaw
- Hammer
- Nail punch
- Crowbar
- Square 16 "x 24"
- Measuring tape
- Chalk "chalk line"
- Rollover tabs [if needed]
- Finitec cleaning products
- Carver

Installation using adhesives is 100% possible for all engineering floors.

### Recommended Adhesives:

- Urethane Adhesives Bostik's Best, BST, EFA, TKO, Vapor lock or single step.
- Any other adhesive meeting the same performance criteria.
- Trowel recommended by the manufacturer of the adhesive. [The correct size of teeth for the trowel is very important to ensure good adhesion of the plank and the warranty.]
- Concrete nails 2 "[50 mm] and strips 1" x 3 "x 8" [25 mm x 75 mm x 245 cm] for support.
- Blue tape "3M" or equivalent [removable tape].
- Roller 100 to 150 lbs [45-68 kg].
- Cleaning Wipes for hands and Bostik's Ultimate Tools.
- Bostik's Ultimate Adhesive cleaner.
- Recoil strap for curved planks.



Installation using staples or nails is specifically for 5" or less engineering floors or 4" or less for hardwood.

### **Recommended staplers and staples**

For 3/8" (10 mm) thick floors:

Use 1-3/4" or 2" length by 15.5 gage diameter staples only. Compressor pressure should be approximately 90 psi so that the depth adjustment of the staples and staple bed can be optimal.

For 5/8" (15mm) thick floors or 1/2" ( 2mm)

- Bostitch 800-556-6696 ([www.bostitch.com](http://www.bostitch.com))
- SX150-BHF-2 with staples from 1-1/4" (32 mm) to 1-1/2" (38mm)
- Drill and 1/16" (1.5mm) bit.
- Finishing nails - approximately 1-1/2" (38mm).
- Floor screws.

For 1/2" (12mm) thick floors

- Primatch Q550ACR or equivalent
- 18-gage with staples from 1-1/4" (32 mm) to 1-1/2" (38mm)
- Drill and 1/16" (1.5mm) bit.
- Finishing nails - approximately 1-1/2" (38mm).
- Floor screws.





You can also get some accessories for pre-finished or pre-oiled floors, such as reduced nose stair, etc. from your authorized dealer American Wide Plank Flooring.

**Note: American Wide Plank Flooring is not responsible for damages caused by the use of inadequate tools or adhesives different from those recommended. All installation equipment must be at the recommended room temperature. (Recommended installation  $\pm 22^{\circ} \text{C}$  [ $\pm 72^{\circ} \text{F}$ ].)**

Installation using glue and nails/staples is specifically for engineering wood floors that range from 6" to 10¼" wide.

- This method is the most frequently used. The use of an adhesive combined with nails/staples, gives an additional bond with the sub-floor and reducing the risk of creaking floors.
- Use the same adhesive (usually sold in a tube) that you would usually use for a 100% glued flooring. This adhesive must have the required criteria.
- During the installation, in order to avoid any air pockets between the subfloor and the planks, place a decent amount of weight before nailing. The glue should not create any air pockets this could end up with creaking floors.
- The application of the adhesive either under the plank or directly on the subfloor, should be at 1" from the end of the plank.
- The glue streak should be about 3/16" to ¼" wide.
- For engineering floors of 10½" et more, it is mandatory to glue 100% of the planks, for hardwood floors of 5" to 8", it is mandatory to glue and staple/nails.

#### Modèles autorisés lors de l'utilisation d'un adhésif:

<p>Serpentin (Onde sinusoïdale)</p>  <p>Bandes parallèles</p>  <p>Extrémités et mortaises</p>  <p>Bandes parallèles longitudinales</p>  <p>ILLUSTRATION COURTESY OF NWFA</p>	<p>1: <b>Serpentin (Onde sinusoïdale)</b>: Espacer les pics des ondes sinusoïdales d'environ 6 à 8 po.</p> <p>2: <b>Bandes parallèles</b> : Les cordons doivent être perpendiculaires au sens longitudinal de la planche avec un espacement de 6 à 10 po entre eux.</p> <p>3: <b>Extrémités et mortaises</b> : Le cordon de colle doit être appliqué sur le rebord de la mortaise et se prolonger sur les deux extrémités de la planche (optionnel).</p> <p>4: <b>Bandes parallèles longitudinales</b> : Les cordons de colle doivent être appliqués à 1 po des rebords de la planche. 3 options sont disponibles :</p> <ul style="list-style-type: none"> <li>• 1 cordon sur le côté du tenon;</li> <li>• Ou 2 sur chacun des rebords;</li> <li>• Ou 3 avec un cordon appliqué au centre.</li> </ul>
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- Please note that the NWFA (National Wood Flooring Association) strongly recommends the use of this method of installation (glued and nailed/stapled) for all engineered planks 6" wide and more. Make sure that the subfloor is wiped clean of any debris before installing. The subfloor can be of a different material, as long as it is per the NWFA and building code requirements of your area.

## Preparations

### Handling and acclimatization

Remember, installing a wood floor finish requires a little more time and care in handling the unfinished floors. Handle planks with care to avoid damaging the finished surface.

### Prepping of the installation area.

#### Environment

- Installation of hardwood floors should be the last step of a construction or renovation.
- The heating system must be functional and room temperatures must be maintained at  $\pm 22^{\circ} \text{C}$  [ $\pm 72^{\circ} \text{F}$ ] for a week.
- The subfloor must be dry and basement well ventilated to avoid damages caused by moisture.
- When installing in the basement or concrete slab, make sure that all parts or objects adjacent to the ground [walls, subfloor, pipes, etc.] are waterproof. Use vapor barriers before or during installation in order to increase water resistance.

Always keep the relative humidity at  $\pm 45\%$  [40-60%]. Conditions relating to the radiant heating system:

- The radiant floor must be glued.
- The system must be tested and in operation for a few weeks before installing the floor.
- Close the system during installation and for the next 24 hours so that the adhesive can dry properly.
- The temperature of the wood's surface should never exceed  $27^{\circ} \text{C}$  [ $80^{\circ} \text{F}$ ].
- If the pipes of the system are visible or exposed on the floor, you must cover them with 3/8" [10 mm] plywood to distribute the heat evenly.
- Because of certain physical properties, Brazilian Cherry [Jatoba / Koubari] must not be installed over radiant floors.

### Procedure



**Wood Subfloor:** Using a wood moisture meter, available from your American Wide Plank Flooring authorized dealer, make sure the moisture content of the subfloor does not exceed 9% and it does not differ by more than 2% of the floor that will be installed. If the humidity is too high, find the source and correct it if necessary, delay the installation of the floor and raise the heating and ventilation or install a vapor barrier. (If the difference is not more than 4%.)

**Concrete subfloor:** The concrete subfloor must be cured for a minimum of 30 days, but preferably between 45 and 90 days. Using a moisture meter for concrete, check for the presence of moisture. If so, the calcium chloride test must be performed. The moisture content of the concrete subfloor must not exceed 3 lbs. per 1000 ft<sup>2</sup> per 24 hours. If over 3 lbs., install a complete waterproofing for concrete [sealant and adhesive] manufactured by Bostik, Sika or Franklin. You should consult the manufacturer's documentation to determine its guarantee, the limitation of its product and follow its recommendations and its installation methods. The concrete floor, being directly on the ground, must have been isolated in the concrete slab and sealed with a vapor barrier film.

**Note:** Store the boxes in the room where the floor will be installed at least 24 hours before installation. The installer and the owner have full responsibility to check the moisture rate and sealing of the subfloor to make sure it is and remains in recommended limits throughout the life of the floor.

## Subfloor

- For stapled installations, the subfloor must consist of a minimum of 5/8" (16mm) thick plywood or particle board" OSB "approved of 3/4 "[19 mm].
- Structural state: Tighten the subfloor to the joists to prevent movement and cracking. Replace the existing floor or subfloor that would have been damaged by water or have structural weaknesses. The concrete must be structurally sound.
- Level: The surface must be flat. The maximum tolerance is 3 / 16 "[5 mm] variation per 10 '[3 m] and of 2.5mm per 3' ( 1m) . If applicable, sand elevations with grit 20 sandpaper or fill uneven spots with leveling compound.
- Humidity: The moisture of the subfloor must be within the recommended limits.
- Cleanliness: The subfloor must be well brushed, smooth and free of debris, staples, exposed nails, old adhesives or other products.

## Preparation

- Sketch the installation to avoid unpleasant surprises.
- Determine the wall or starting point.
- Determine which way the planks are to be installed.
- Remove baseboards, door sills and the old floor covering if necessary.
- Using a hand saw, make space at the bottom of door frames, insert the hardwood planks.
- To improve the visual appearance, use multiple boxes at once and mix the planks to ensure a variation of colors, shades and lengths.
- From the start, select the planks that best fit with the transition moldings that will be installed.

## Glued-down installation - Procedure

### Step 1 - Establish the starting line

- Using a chalk line, draw a parallel line to the wall starting at 31 “[788 mm] for planks 2-9/16 “[65 mm] wide, 33-3/8” [848 mm] for planks 3-5/16 “[84 mm] wide, 30-1/4” [768 mm] for planks 5 “[127 mm] wide, or 32-11/16 “[832 mm] for planks 6-1/2” [185 mm] wide. The section between the starting wall and the line will become the working area for the start of the installation and will be the last part of the floor to be covered. The measure will help you avoid narrowing the last row of planks while leaving the ¼ “[6 mm] minimum required for the expansion joint.
- Nail the plank guides inside the working area along the line. These guides will serve as support for the installation of the first planks.

### Step 2 - Application of the adhesive

- Apply adhesive by sliding the trowel at an angle of 45°. The adhesive that will settle between the teeth of the trowel will be the amount needed. [Approximately one gallon for 30 to 50 ft<sup>2</sup> according to the manufacturer of the adhesive.]



- Note: Do not spread the adhesive over an area that requires more than two hours to cover. The adhesive may dry out and may not produce good adhesion. Read the information on the container of the adhesive. The reaction time for adhesion varies from one manufacturer to another. It can also be affected by temperature and relative humidity in the room.

### Step 3 - Installing the planks

- It is very important to start straight and at a right angle.
- Select the planks carefully. If necessary, cut and relocate to an area less visible for planks considered different.
- Using the work area, install the first plank at  $\frac{1}{4}$ " [6 mm] from the wall and perpendicular to your left, side of the tongue blade against the slate, and press the plank into the adhesive.
- Install the following planks to your right until you have to cut the last board to complete the row.
- The plank selected to complete the first row should be sufficiently long to start the following row, this will minimize losses caused by the cut. Leave  $\frac{1}{4}$ " [6 mm] between the wall and the end of each plank of each row.
- Begin the second row with the left-over plank from the end of the first row. It should be at least 6" [150 mm] longer or shorter than the plank used in the first row. The offset of transverse joints in a row to the other must be at least 6" [150 mm] this will avoid the effect of alignment or too regular joints.
- Engage the tip of the groove in the tongue of the board and lower it as close as possible to the adjacent board. Slide the tongue side into the groove, then press on it.
- The subsequent rows are installed the same way as before.
- If the main section of the floor is finished, remove the slate guides, and then install the work area in the same way. Fit the last row of planks with a lever bar keeping in mind the necessary  $\frac{1}{4}$ " (6mm) space minimum for the expansion of the joints.

#### Note:

- If you install an acoustic membrane, it must be glued to the subfloor and the planks will then be glued to the membrane using the same adhesive recommended.
- Extremely precise cuts may require the use of a "tapping block" in order to fit onto each other. Do not put adhesive in the grooves of the planks, this would prevent them to nest perfectly with the next row of planks.



- Keep your fingers clean at all time to minimize cleaning. Throughout the installation, immediately wipe any overflow of adhesive onto the surface of the floor using wipes or Bostik's Ultimate adhesive cleaner. If the adhesive remains, use paint thinner or lighter fluid.
- Use "3M" blue tape to keep the planks in place. This will prevent them from moving and cause spaces between them during installation.
- After installing a section of the floor, it is recommended to use the scroll as suggested by the manufacturer of the adhesive [about 100 to 150 lbs. / 45-68 kg] to ensure better contact with the adhesive strips. Wrap with a protective film to prevent damage to the floor surface and use during the active period of the adhesive.

Note: The longer the planks, the greater the risk of arching. Recoil straps may be necessary to achieve quality workmanship.

#### **Step 4 - Installation of moldings**

- If applicable, install transition moldings, stair nosing and reducers.
- Reinstall the baseboards, quarter rounds, making sure to nail them to walls and not to the floor [to allow the natural movement of the floor].

#### **Step 5 - Maintenance**

- Wait 24 hours before replacing furniture or allow heavy traffic.
- Keep a few boards on hand for possible repairs.
- When the installation is completed, vacuum the floor thoroughly. Follow the maintenance guide of American Wide Plank Flooring.

### **Installation of floor using staples.**

#### **Step 1 - Establish the starting line**

- Using chalk, draw a line parallel to the starting wall to 2-13/16 "[71 mm]
- for planks 2-9/16 "[65 mm wide, or 3-9/16" [90 mm]
- for planks 3-5/16 "[84 mm] wide, or 5-1/4" [133 mm]
- for planks 5 "[127 mm] wide, or 32- 11/16 "[832 mm]



for planks 6-1/2" [185 mm] wide, considering the 1/4" [6 mm] minimum required for the expansion joint. This online guide is to be perpendicular to the adjacent wall.

## Step 2 – Installing the planks

- It is very important to start straight and at a right angle.
- Select the planks carefully. If necessary, cut and relocate to a place less visible for planks considered different.
- Install the first plank to 1/4" [6 mm] perpendicular to the wall to your right, side of the tongue blade placed along the starting line and the side of the groove facing the starting wall. Drill and nail the plank on top, as close as possible to the wall. The bottom of the wall moldings or baseboards will hide the heads of the nails. Install the following plank to your left until you have to cut the last board to complete the row.
- The plank selected to complete the first row should be long enough to start the second row, which will minimize losses caused by the cut. Leave 1/4" [6 mm] between the wall and the end of the last plank of each row.
- Start the second row with the leftover plank, it should be at least 6" [150 mm] longer or shorter than the strip used in the first row. The offset of transverse joints in a row to the other must be at least 6" [150 mm] as to avoid the effect of alignment or too regular joints.
- The first row of planks should be nailed by hand with a hammer with finishing nails because the wall will block the use of a stapler. Nails should be attached along the strip at about 4" [100 mm] away from each other.
- The subsequent rows are installed the same way, but using the stapler. [See below for tips on using the stapler.] The nails should be at about 4 to 5" [100-125 mm] from each other, and more than 2" [50 mm] from the end of each blade.
- The last 4 or 5 rows should be installed the same way as the first rows due to the proximity of the wall. You may have to reduce the planks that run along the wall to let the 1/4" [6 mm] required for the expansion joint.

Note: Extremely precise blades may require the use of a "tapping block" to follow them well into each other.

## Step 3 – Installation of moldings

- If applicable, install transition moldings, stair nosing and reducers.
- Reinstall the baseboards, quarter rounds, making sure to nail them to walls and not to the floor [to allow



#### **Step 4 - Maintenance**

- Keep a few planks (usually 1 to 5 boxes) for repairs.
- When the installation is completed, vacuum the floor thoroughly and follow American Wide Plank Flooring guide.

#### **Use of air stapler**

##### General Tips

- The base of the stapler must always remain clean and smooth.
- Move the stapler on plywood or on cardboard rather than on the hardwood floor to avoid damaging the planks.
- Be sure that the stapler is always well supported on both the top and side of the planks before stapling.
- Regularly check the status of the stapler and its operation to avoid damaging the planks.
- Adjust the air pressure depending on the subfloor, then check it regularly throughout the installation.