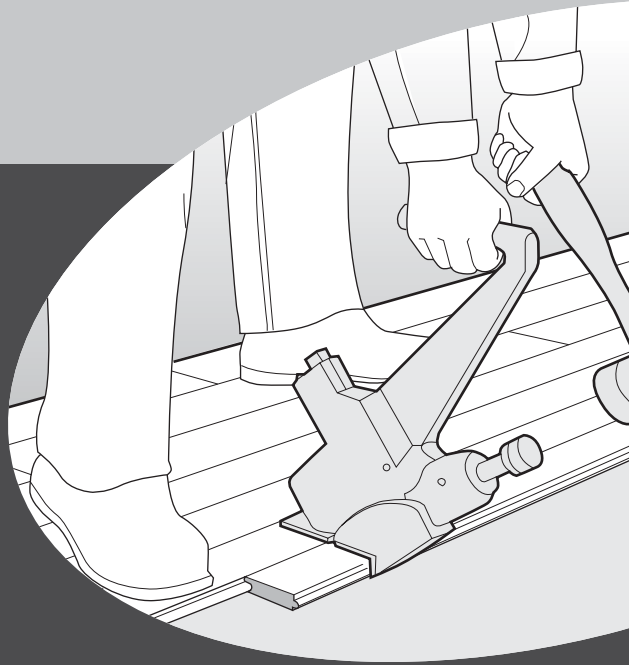


# Installation Guide

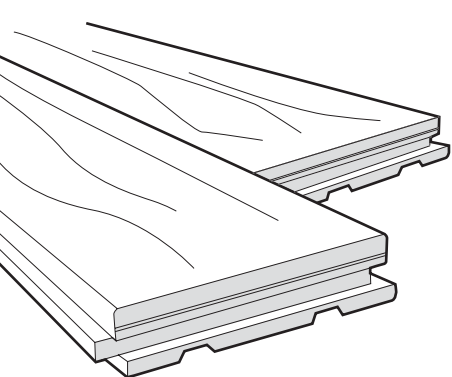
for your Mercier wood flooring

3/4" solid



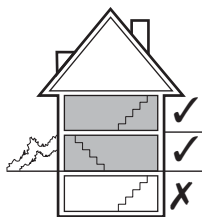
**MERCIER**

wood flooring



## Product description

Our solid wood boards are completely sanded and finished in our plant under ideal conditions. Since they are prefinished, they are ready to enjoy as soon as they are installed. Each board is composed entirely of solid, 3/4" wood, so no gluing or laminating is necessary.



## Recommended use

- Above grade      yes
- On grade        yes
- Below grade     no

## Duties and responsibilities of installers and homeowners

Mercier floorboards are made of solid wood, a natural material that may have some imperfections. Mercier products meet rigorous quality standards and comply with current wood industry standards, which stipulate that the imperfection rate cannot exceed 5% of the floorboards purchased. This also includes natural imperfections in the wood as well as manufacturing and grade selection defects.

Mercier floor experts conduct meticulous quality tests to ensure floorboards comply with the established criteria. Installers must use discretion when choosing boards and omit, place in a less visible area, or cut those with serious defects as needed, regardless of their origin. If installers have doubts about the grade and finish or manufacturing quality and can neither place boards in a less visible place or eliminate the imperfection, they should not install them.

Once boards are nailed down, they are considered to have been accepted by the installer and homeowner.

Depending on the location and installation type<sup>1</sup>, order 4% to 6% more flooring than needed to compensate for cutting losses. Mercier will only replace products with a defect rate above the acceptable 5% loss (excluding the 4% to 6% margin for cutting losses). Mercier will not be held liable for the careless installation of its products or the poor judgment of installers. Mercier will not cover labor or installation costs.

Before installing the floor, installers and homeowners must ensure that the installation site and subfloor meet the conditions in this document. **Installers and buyers** are responsible for inspecting floorboards prior to installing them.

<sup>1</sup> Angle installation causes greater cutting losses, up to 7% to 9%.

## Materials and recommended tools

1. Vacuum or broom
2. Miter saw
3. Hardwood nailer (pneumatic<sup>2</sup> or manual) and flooring nails
  - Primatech p-210 pneumatic
  - Primatech h-300 or h-330 manual (multiple hit)
  - Powernail Model 445LS Pneumatic
4. Drill and 3/32" bit
5. Hammer, finishing spiral nails, and nail set
6. Measuring tape
7. Chalk line reel
8. Square and bevel square
9. Crowbar
10. 4" or 5" wide putty knife
11. Handsaw
12. Mercier touchup kit
13. Mercier maintenance kit

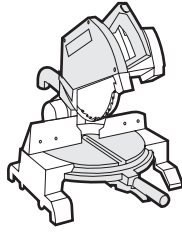
Note: Mercier Wood Flooring is not liable for damages caused by unsuitable tools or the improper use of materials. Depending on the type of installation, you may also need special moldings for your floor such as nosing and reducer strips. These moldings are the same color and wood species as your floor and are available at your Mercier retailer<sup>1</sup>.

<sup>1</sup> This is not an exhaustive list of installation tools that could be used, and Mercier Wood Flooring makes no warranty, nor can we give technical support for their use.

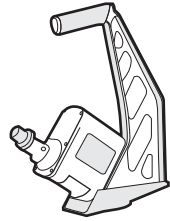
<sup>2</sup> Pneumatic nailers are easier to use and require less strength for less experienced installers.



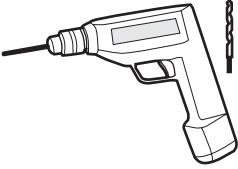
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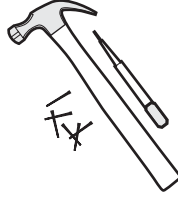
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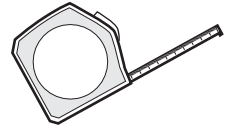
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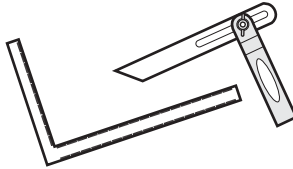
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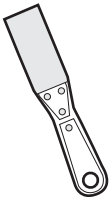
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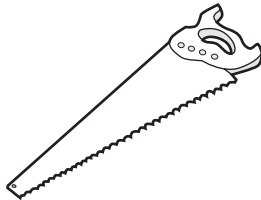
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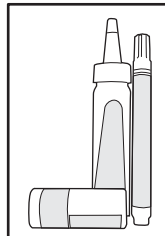
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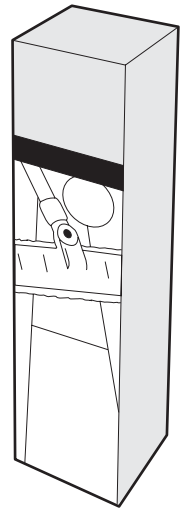
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**You may need other materials and tools such as:**

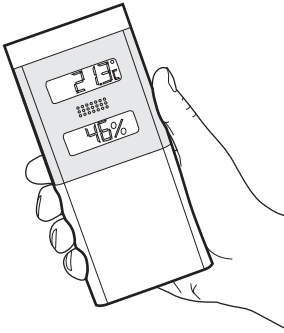
- Slip tongue
- Table saw for ripping boards in the last row
- Electric sander to level the subfloor
- Leveling product for the subfloor
- 15 lb felt paper, non-tarred (or equivalent)
- Stapler
- Floor screws
- Wood glue

Note: Mercier Wood Flooring is not liable for damages caused by unsuitable tools or the improper use of materials. Depending on the type of installation, you may also need special moldings for your floor such as nosing and reducer strips. These moldings are the same color and wood species as your floor and are available at your Mercier dealer. This is not an exhaustive list of installation tools that could be used, and Mercier Wood Flooring makes no warranty, nor can we give technical support for their use.

## Preparing the environment

Laying the floor should be the last step of your project. Even before the flooring is delivered, make sure that:

- Your house is closed, with all doors and windows installed
- Concrete, plaster, paint, and the subfloor are completely dry
- The heating or ventilation system is working properly and that the conditions inside your home have been kept at an approximate temperature of 20°C (70 °F) and a relative humidity between 40% to 55% for at least one week
- The foundation is dry and the basement well ventilated
- The floor of the crawl space (if there is one) is completely covered by 6–8 mil black polyethylene film



**The installer or homeowner must verify the moisture level of the subfloor (plywood or OSB) in various locations using a wood moisture meter<sup>3</sup>. The subfloor moisture level must not exceed 12%, and the difference between the subfloor and floorboards must not be greater than 4% of the floorboards' internal moisture level, which is 6% to 9%. If the subfloor moisture level or floor/subfloor difference is too high, provide the site with more heat and ventilation and delay floor installation.**

Once conditions are right, bring the boxed floorboards to the installation site. Open a box to check product species, grade, color, size, and quality. If everything is fine, open the boxes, set them aside, and leave the wood to acclimatize for 4 to 5 days. Please advise your dealer immediately of any problem. To avoid any variation in internal wood moisture levels before installation, avoid exposing the boxes to rain or snow. Never store boards in unsuitable locations such as a shed, unheated garage, or basement.

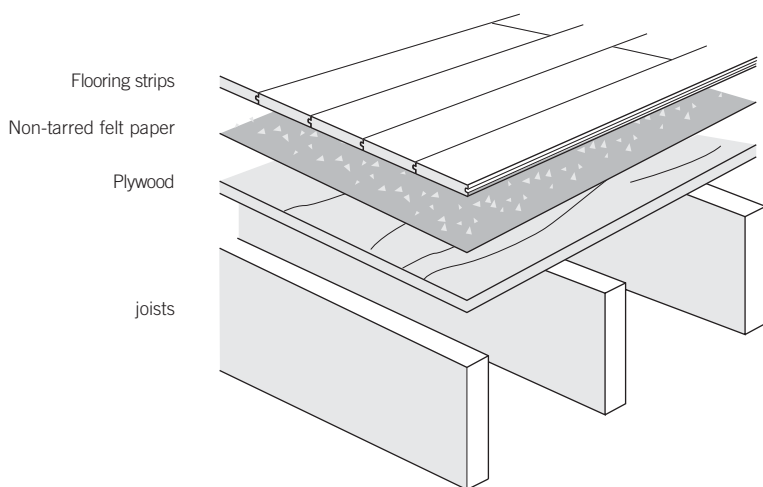
<sup>3</sup> You can rent this device at your dealer or a rental center.

## Floor structure

Generally, there are two types of floor structures: conventional wood frames (beams and joists) and concrete slabs. Radiant heating systems are an additional variation. In all cases, the subfloor must comply with the guidelines described below.

## Installation on wood beams and joists

Mercier recommends using 3/4" plywood or oriented strandboard (OSB) panels as a subfloor on joists spaced up to 19.2" apart.



### Preparing and leveling the subfloor:

- The subfloor must be firmly fixed to the joists to avoid any panel movement that could cause creaking. Use flooring screws if necessary to prevent creaking.
- The surface must be level. The difference in level must not be more than 3/16" over a distance of 6' distance or more than 1/4" over 10'. Eliminate small surface irregularities with a sander or floor leveler.
- The surface must be clean. Remove glue residue and staples, and drive in protruding nails. Remove debris and dust with a broom or vacuum.
- It is recommended that you use non-tarred felt paper on the subfloor surface to reduce normal mechanical friction between materials and facilitate installation. Lay the felt paper in the direction of the boards using staples, overlapping the ends by 3" to 4". Drive in staples. **Do not use felt paper if the floor has a radiant heating system or acoustic membrane.**

## Installation on concrete slabs\*

Solid wood floors 3/4" thick may be installed on concrete slabs on the ground floor or a second floor, but are not recommended in the basement. As these boards **must be nailed**, the installer must first install a subfloor over the concrete slab.

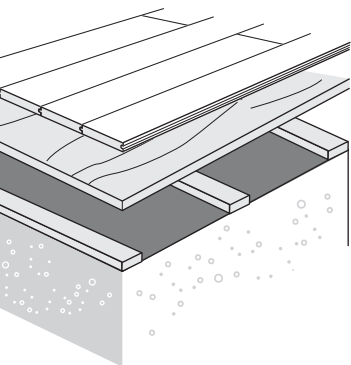
### Preparing and leveling the concrete slab

Concrete slabs should be free of any surface defect. If they are not, fill gaps with leveling cement or sand uneven areas. Concrete slabs must not slope more than 3/16" over 10' or 1/8" over 6'. The surface must be clean and free of contaminants such as grease, dust, or oil. If the concrete is low density, powdery, or cracked, a floating subfloor is preferable.

### Verifying the concrete slab moisture level

For a moisture test to be reliable, the concrete must be allowed to dry for at least 30 days. Use a moisture meter to detect moisture. The maximum permissible reading is 4.5% (Tramex moisture encounter). Perform the test in various locations near the outside walls as well as in the middle of the room. If the concrete moisture level is too high, always wait to install the subfloor and floorboards. Speed up drying with heating and ventilation devices. Conduct a new test a few weeks later.

\* Engineered flooring is specifically designed to be installed directly over concrete and is the overwhelming recommendation of Mercier Wood Flooring.



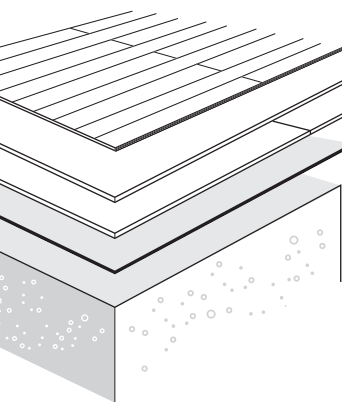
## Recommended subfloor installation on concrete slabs

There are two methods for installing a subfloor on a concrete slab. Use an appropriate vapor barrier between the slab and subfloor for each of these methods, i.e., unroll a 6 mil polyethylene film over the entire surface of the slab, overlapping the edges by 4" to 6". Leave 3" to 4" of excess film around the room.

- Subfloor on screed system
- Double plywood system

### *Subfloor on screed system*

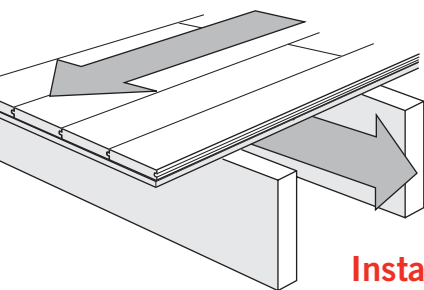
Using concrete fasteners, attach screeds every 12" perpendicular to the floorboards. Leave 3/4" between the strips and wall edges or other vertical obstructions. Lay plywood panels at least 5/8" thick on top of the screeds and attach with flooring screws.



### **Double plywood system**

Double plywood subfloors require two layers of 3/8" or 1/2" exterior plywood installed one on top of the other. Position the first plywood layer, placing the longest sides parallel to the longest wall and fasten firmly to the concrete. Keep 3/4" free at wall edges and 1/8" between panel edges, doorjamb, and other obstacles where there will be no trim.

The second plywood layer must be placed at a 45° or 90° angle to the first layer, proceeding the same way as for the first layer. Fasten the two layers together every 12" with nails or screws that are shorter than the combined thickness of both layers.



## Installation techniques for laying floorboards

- Install your floor under good lighting conditions. This lets you balance board length and color variations in the wood.
- Take precautions to not damage the finish. For example, place tools and the flooring hammer on a protective mat during installation. Vacuum frequently to eliminate sawdust and abrasives.
- Before starting installation, cut the bottom moldings around doorframes to insert the floorboards.
- Plan your project by making an installation sketch.
- Determine the installation starting point. Is it one regular-shaped room, a number of rooms with landings, or rooms on one floor, including a hall or main room? How to get the most from your project? If in doubt, ask your Mercier dealer for advice.
- Choose the floorboard direction. It is strongly recommended you install boards at a 45° or 90° angle to the joist direction.

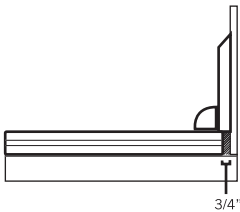
## Using the nailer

- Practice using the floor nailer on a scrap board. Follow the safety tips and instructions of the nailer manufacturer.
- Clean the nailer base plate regularly to ensure it does not damage the finish.
- If you are using a pneumatic nailer, adjust the compressor air pressure for the hardness of the species (about 80–90 psi). Follow the safety tips and instructions of the nailer manufacturer.

## Steps for nail installation

### Starting line:

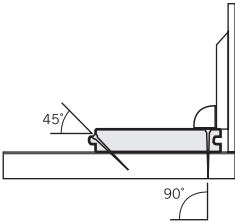
- Use a chalk line to trace a guideline parallel to the starting wall at a distance from it equal to the board and expansion joint ( $3/4$ " ) width, e.g., 4" for a  $3\ 1/4$ " board.
- The expansion joint is necessary to allow the wood to react to changes in ambient humidity. The expansion joints will be hidden by baseboards and quarter rounds, which will be nailed to the walls and not the floor. If baseboards are very thin or there are no quarter rounds, you may hide the expansion joints by removing a strip of drywall the thickness of a board at the base of the wall.



$3/4$ " expansion joint for a flooring strip of  $3\ 1/4$ "

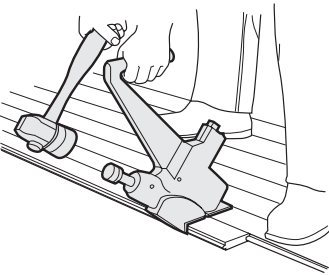
## Installing the boards:

- Be sure to start straight and square.
- Lay out 4 to 5 rows of boards ahead of time that match in terms of joints and color. Cut boards with imperfections or place them in less visible areas.



- Install the first board along the starting line with the tongue facing you and the groove facing the starting wall. Always keep a 1/4" expansion joint at row ends.

- The first row should be handnailed. Drill holes at a 90° angle on the surface of the boards as close as possible to the wall and fasten them with finishing spiral nails. Drive nail heads in with a nail driver. Then, drill holes at a 45° angle in the tongue (male part) and fasten with finishing spiral nails.



- The last board in the row will have to be cut. An easy way to measure the length of the board that will finish the row is to turn it lengthwise to quickly establish the cut mark. The remainder (leave at least 6" in length) will serve to start the next row.

- Use the manual or pneumatic nailer for the next rows. The boards should be nailed at every 6". Fasten each board with at least two nails. Never nail less than 2" from board ends, to prevent the tongue from splitting.

- For best results, stagger the joints 6" to 8" from the previous row and alternate board length.

- The final boards should be installed the same as the first boards. You may have to rip the last row lengthwise to leave a 3/4" expansion joint.



## Special situations

### Transition molding

During installation, you may have to use nosing and reducer moldings, which are generally nailed to the subfloor. You can use a slip tongue (thin strip of wood inserted into the groove and glued with wood glue) to join moldings to floorboards. **Before installing the floor, it is recommended that you select boards that are a good match with the moldings to ensure an appealing visual transition.**

### Acoustic membrane

An acoustic membrane may be used between the subfloor and solid wood strips for better soundproofing. Mercier recommends using the Tech 3500, Tech 5000, or Tech 7000 membranes from AcoustiTech (1-866-889-0001).

## Finishing and upkeep

You can hide the small holes left by finishing nails with a Mercier wood putty.

1. Fill the hole with the wood putty.
2. Wipe excess wood putty immediately with a clean cloth and mercier cleaner.
3. Apply a thin coat of urethane to the surface.
4. Let dry for about an hour.

Once installation is done, vacuum the floor and clean with Mercier cleaner and the specially designed mop.



Innovation, Tradition... Perfection

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