

Installation guide NanoShell Floors

HOW TO INSTALL HARDWOOD FLOORING

Following these instructions carefully will greatly impact the life of your floors and whether or not you can take full advantage of the warranty.

IMPORTANT – BEFORE YOU START

Hardwood is a product of nature. It is a living matter. It reacts to relative humidity variations. Wood will retract in winter and expand in the summer. In order to keep the expansion and retraction of your floors to a minimum, it is important that you maintain **the humidity level of your home between 40% and 55% all year long. We recommend letting the wood boards acclimate themselves to the relative humidity level inside the house for 72 hours before you start the installation.**

- Hardwood floors should be the last thing you install when renovating.
- Start heating the house at least one week before you begin the installation.
- Keep the sub floor dry and the basement well ventilated.
- Maintain the relative humidity level of your home between 40% and 55%.

Plan on purchasing 4% to 6% more boards than you need to cover the entire floor, to compensate for material waste due to cuts.

PREPARING THE SUB FLOOR

1. Test the Sub Floor Humidity Level

Using a wood humidity tester, verify that the humidity level of the sub floor is not greater than 12%. **For floorboards up to 3 ¼" wide, flooring should not be installed when the moisture content of the subfloor and the floorboards differs by more than 4%. For floorboards of 3 ¼" wide and more, flooring should not be installed when the moisture content of the subfloor and the floorboards differs by more than 2%.** If the humidity level of the sub floor is too high, find the source for this humidity and make sure it stops increasing the humidity level of the sub floor. If needed, delay the installation while you ventilate the area and increase heating.

The installer and the owner are fully responsible for verifying the humidity level of the sub floor and ensuring that the humidity level is, and remains, within the prescribed limits.

2. Verify the Conditions of the Sub Floor

Verify and, if needed, correct the solidity of the sub floor. Since it must be absolutely flat, **sand down any irregularities with 20 grit sandpaper or fill them with compound.**

3. Clean the Sub Floor

The sub floor must be clean and free of any contaminants.

4. Installing a Vapour Seal

A vapour seal must be placed between the floor and the plywood $\frac{3}{4}$ " thick or on 23/32" high-density OSB. If the vapour seal is glued to the concrete, the humidity level must not be greater than 5%. We do not recommend installing hard wood floors in basements, only on main floors and second stories and above.

5. Remove Baseboards and Door Sills

6. Remove $\frac{3}{4}$ of an inch (2 cm) off the bottom of door frames with a saw to leave enough room to insert an hardwood board.

7. Be Careful not to Damage the Finish

During the installation, lay down your tools and floor hammer on a protective mat or thick cardboard. Vacuum while the installation is ongoing and remove any abrasive material or sawdust.

8. Draw an Installation Plan

Establish the direction of the boards and decide along which wall or starting point you want to begin the installation. Ideally, floor boards should be installed either perpendicular to the floor joists or at a 45° angle.

9. Lay Dow Felt Paper

Cover the floor with felt paper (or something similar). If the sub floor has a central heating system or is covered by a sound proof membrane, do not use any felt paper.

10. Measure the Room

Measure the room very carefully to ensure your new floor is installed at a right angle and is even. Note that corners rarely form perfect 90° angles.

Very important: The installer is the last person to inspect the boards. Any board whose grade is deemed unacceptable must not be installed.

11. Open a Few Boxes and Lay Down the Boards

To get the best results possible, lay down the boards across the whole room, as they will be installed, to ensure that you mix colour and shades harmoniously.

Remove unwanted boards or move them to another spot.

Match the boards with the transition mouldings and quarter rounds, as closely as possible.

Tip: Be careful not to unintentionally create patterns with the wood's normal colour variations. Keep the less perfect boards for less visible areas.

INSTALLING FLOOR BOARDS

12. Trace a Line to Ensure the First Row is Perfectly Straight

Use a chalk line to trace a guide parallel to the starting wall. Depending on the width of the boards you are installing, add $\frac{3}{4}$ of an inch (19 mm). This measurement corresponds to the area needed for the expansion joint and the tongue. For example, if you have chosen to install $2\frac{1}{4}$ inches (57 mm) boards, trace the line 3 inches (75 mm) away from the starting wall. This guide line must be perpendicular to the adjacent wall. It is absolutely crucial that you begin the installation at a perfect square angle.

Tip: Choose the longest and straightest boards for the first row.

13. Lay Down, Pierce and Nail the First Row

Install the first board $\frac{1}{4}$ of an inch (6 mm) away from the perpendicular wall on your right. The tongue side of the board should be along the starting line and the groove side facing the starting wall. Pierce and nail on the face of the board as close to the wall as possible, approximately every 12 inches (30.5 cm). Floor moulding and baseboards will hide the nail heads. Install the following boards by moving to the left and continue until you have cut the last board and finished the row. Leave a $\frac{1}{4}$ of an inch (6 mm) gap between the wall and the edge of every last board of every row.

14. Re-use the Cut Boards to Begin the Next Row

The length of the remnant of the board you cut to finish the first row, should be long enough to allow you to start the second row. This method will reduce losses due to cuts. The remnant should be at least 6 inches (150 mm) longer or shorter than the board used in the first row. This will prevent the joints from lining up in an unattractive pattern.

15. Nail the First Rows by Hand

The first rows must be nailed by hand with a hammer, a punch and finishing nails because the wall is too close to use a nail gun. The nails must be nailed along the board about every 4 inches (100 mm).

16. Use the Nail Gun as Soon as You Can

Install the subsequent rows in the same manner, but start using the nail gun.

- The distance between the nails must be about 8 to 10 inches (200 to 250 mm) and more than 3 inches (75 mm) away from the edge of each board.
- The distance between staples must be about 4 to 5 inches (100 to 125 mm) and more than 2 inches (50 mm) away from the edge of each board.

Note: The nail gun is a much better choice than a stapler because staples tend to break the tongue when the boards expand or retract during seasonal changes.

FINISH

17. Nail the Last Rows by Hand

You must install the last four or five rows as you did the first rows because of the proximity of the wall. You may have to cut the board installed along the wall to leave the $\frac{3}{4}$ of an inch (19 mm) needed for the expansion joint.

18. Install the Baseboards

Install the floor mouldings as well as the stair nosing and riders. Re-install the baseboards and the quarter rounds (if needed) by nailing them to the wall, not to the floor, as this will allow the normal movement of the floor to occur. When installing boards in an adjacent room, be careful to choose boards whose shade matches harmoniously with the already installed boards.

19. Cleaning the Floor

After you have completed the installation, vacuum the floors thoroughly. Spray some hardwood cleaner on a cloth-covered duster and wipe the floor dry. (Please read our **Care and Maintenance** document.)

20. Install Felt Cushions Underneath All Furniture

Place furniture slides underneath the legs of your kitchen appliances and furniture to avoid damaging your floors when you move them.

21. Lift Furniture When Moving It

Tip: Keep a few replacement boards for future repairs.