



McMillan Waterproof Wood-based Laminate Installation Instructions

Thank you for your McMillan Waterproof laminate flooring purchase. Our waterproof floors are beautiful, durable, and backed by industry-standard warranty coverage.

With proper job site preparation, installation, and routine care and maintenance, your new waterproof floor will give you years of beauty and function.

McMillan Waterproof flooring is intended for interior use only and is suitable for the above-grade, on-grade, and below-grade applications. McMillan Waterproof floors should not be installed in locations where the substrate below the building structure is exposed to the elements or where there are structural problems related to ongoing moisture exposure.

Important notice

Every application and installation is different therefore we strongly recommend the customer consult a licensed installer/contractor to verify that the conditions and application meet local requirements or industry expectations. Any installation guidelines are not intended to supersede federal, state, or local regulations, which may require modifying the existing installation, materials, or structural components. The owner assumes responsibility for compliance with all building codes, including maintaining the required distance from heat sources such as fireplaces.

All wood-based products, even those specifically designed to have increased resistance to moisture, are hygroscopic (they will react to the moisture in the environment) and, as a result, will expand or contract accordingly. All sources of underfloor moisture must be rectified prior to the installation of the floor. Any construction dampness must be completely dry. It is important that you check each plank for any manufacturing defects. Any faults must be reported back to the store of purchase for an immediate refund or replacement prior to the flooring being installed.



INSTALLER/OWNER RESPONSIBILITY

Please read these instructions and warranty disclosures completely before proceeding to installation! BY INSTALLING THIS PRODUCT, YOU ASSURE THAT ALL INSTALLATION REQUIREMENTS OUTLINED HERE HAVE BEEN MET AND AGREE TO THE TERMS AND CONDITIONS OF THE MCMILLAN WATERPROOF FLOORING LIMITED WARRANTY.

PRODUCT HANDLING & INSPECTION

Always transport and store McMillan Waterproof Flooring carefully to prevent damage to the flooring product. Store on a flat surface. Do not store boxes upright on their ends or in areas subject to extreme temperatures.

It is the installer/owner's responsibility to do a final inspection of the flooring prior to installation. This inspection should include product color, quality, finish, and locking system. McMillan Flooring will not accept responsibility for the installation of the floor with visible manufacturing defects.

If the product is not acceptable, DO NOT PROCEED TO INSTALLATION.

Do not continue opening cartons and do not discard cartons that were opened during the inspection. Contact your flooring retailer immediately for assistance!

PREPARATION

- An approved laminate underlayment must be used for all installations. Underlayment thicker than 3mm (1/8") is not advised and will void the warranty.
A vapor barrier must be installed over concrete substrates.
A minimum 6 mil (0.15mm) plastic poly sheeting should be used as a moisture barrier.
- Do not install cabinets or fixed objects on top of the flooring. Proper expansion space 1/2" (12 mm) is required. Undercut all doorjamb.
- Inspect your subfloor before you begin. Subfloors must be clean, and level to 3/16" within a 10 lineal foot span. Concrete subfloors must be dry (max. 2.5% moisture content - CM method).

ACCLIMATION

In most cases, this product can be installed immediately and does not need to be acclimated. If the relative humidity in the room is below 35% or above 70%, the product should be acclimated by placing the unopened boxes in the room where the flooring is to be installed for 48 hours. The room



temperature must be between 60-78°F (18-25°C) during installation and, if required, during acclimation.

JOBSITE PREPARATION

EXTERIOR

Structural damage caused by water and/or high humidity must be resolved prior to installing McMillan Waterproof flooring.

Ensure that exterior grading is complete with surface drainage offering a minimum drop of 3" in 10' to direct exterior water sources away from the structure where the flooring will be installed inside.

Crawl spaces should be a minimum of 18" high, insulated per latest building code requirements, with a minimum 6-mil ground cover vapor barrier. Crawl spaces should offer cross-ventilation air vents equivalent to at least 1.5% per 100 square feet of floor space.

INTERIOR

Moisture issues must be detected and corrected before installation. McMillan Waterproof flooring are waterproof but are not intended for use as a moisture barrier.

The jobsite should be enclosed and climate-controlled. HVAC systems must be fully operational with a consistent room temperature of 65° - 85° F and relative humidity levels of 35%-55% before the flooring is delivered or installed, and throughout the lifetime of the flooring installation.

Do not install McMillan Waterproof floors where they will be subject to extreme hot or cold temperatures at any time. Do not install cabinets or heavy fixtures directly onto McMillan Waterproof Floors.

To eliminate potential trade-related damage, McMillan recommends that its flooring be one of the last jobs completed.

SUBFLOOR CONDITIONS

The quality and preparation of the subfloor over which your McMillan floor will be installed is critical to a successful installation.

ACCEPTABLE SUBFLOOR TYPES

- CDX Plywood



- Concrete. The minimum compression strength of 3000 PSI
- OSB/Particleboard
- Existing resilient tile, sheet vinyl (one layer) or ceramic tile

Minimum subfloor requirements for all installations:

- Structurally sound, smooth, clean and free of debris, including but not limited to, staples, nails, wax, grease, paint, sealers and old adhesives.
- Level and flat to 3/16" per 10'.
- Dry throughout the lifetime of the installation.

Wood subfloor must be:

- Tested for moisture not to exceed 11%.
- Nailed or screwed down every 6 inches along the joists to remove subfloor squeaking.
- Leveled with high spots sanded down and low spots filled with a leveling compound. Leveling material should provide a structurally sound wood subfloor.

Concrete subfloor must be:

- Fully cured for at least 60-90 days prior to McMillan Waterproof Flooring installation.
- Tested for relative humidity, moisture, and pH. Relative humidity tests should not exceed 85% (RH); Calcium Chloride Test for the moisture should be no more than 8lbs per one-thousand square feet in 24 hours MVER (Moisture Vapor Emission Rating) and pH tests for alkalinity levels should register between 7 and 9.
- Installed properly with a minimum 6-mil poly film moisture barrier between concrete and ground below.

Resilient tile, sheet vinyl, or ceramic tile requirements:

- No more than one layer.
- Well secured to the structural subfloor.
- Grout lines of any depth should be filled in with a cementitious leveling and patching compound to assure a smooth, flat surface.

DO NOT INSTALL MCMILLAN FLOORING OVER CUSHION BACKED GOODS OR ANY OTHER FLOORING THAT IS NOT COMPLETELY ADHERED TO THE SUBFLOOR.



Floor coverings that must be removed prior to McMillan Waterproof flooring installation

include: Carpet, needle felt, cushion vinyl, floating floors of any kind; parquet, solid and engineered hardwood over concrete; sleeper substrates. Do not install over existing wood flooring glued to concrete.

RADIANT HEAT GUIDELINES

IMPORTANT NOTICE In-Floor Radiant Heat Systems:

Flooring can be installed over 1/2" (12mm) embedded hydronic (water-based) heat systems. Radiant heat systems must have a minimum of 1/2" (12mm) separation from the product. Maximum operating temperature should never exceed 80°F (27°C). Use of an in-floor temperature sensor is required to avoid overheating.

- Before installing over newly constructed radiant heat systems, operate the system at maximum capacity to force any residual moisture from the cementitious topping of the radiant heat system.
- Radiant heat systems must be in operation for a minimum 3 weeks prior to installation of laminate flooring
- Maximum concrete subfloor moisture content should be no more than 2.5% (per CM method).
- Install vapor barrier and underlay as stated in this installation guide.
- Before starting the installation, turn the heat off for 24 hours before, during and 24 hours after installation.
- Make sure that the temperature in the room is between 60°F (16°C) and 80°F (27°C) during installation.
- Once the installation has been completed, the heating system should be turned on and increased gradually (5°F degree increments) until returning to normal operating conditions.
- Refer to the radiant heat system's manufacturer recommendations for additional guidance
Warning: Electric heating mats are not recommended for use underneath the flooring and will void the warranty.



INSTALLATION

Tools generally needed: Safety glasses, tape measure, pencil, chalk line, rubber mallet, pull bar, jam saw or undercut saw, 1/2" thick spacers, crosscut power saw, circular or radial arm saw, and tapping block.

McMillan Waterproof floors are designed to replicate the look of a real wood product with natural variations in color, texture, and grain. For optimal visual effect, shuffle planks from several cartons and avoid installing similar planks nearby one another.

For aesthetic purposes, plank flooring is often laid in the direction of the longest wall. It is the responsibility of the installer/owner to make the final decision regarding which direction the planks will Run.

McMillan floors can be installed in a staggered fashion to achieve an overall random appearance, but other patterns can be employed and it is the responsibility of the installer/ owner to make this decision prior to installation.

STARTING INSTALLATION

Select installation starting point next to an outside wall. This is usually the straightest and best reference for establishing a straight working line.

Establish the working line by measuring an equal distance from the wall at both ends and snapping a chalk line. The distance you measure from the wall should be the width of a plank. You may need to scribe cut the first row of planks to match the starting wall in order to make a straight working line if it is out of square.

Undercut or notch-out door casings to fit flooring thickness by placing a piece of flooring on the subfloor as a height guide for sawing.

Remove door thresholds and base moldings and replace them after flooring installation. Always leave at least 3/8" expansion space around the perimeter including adjacent existing flooring or other structures such as hallways, door jams, and thresholds. For rooms wider than 50', a 1/2" expansion space is required.

For the best visual effect, planks in the final row of the installation area should be at least 1/3 the width of a full plank.

Measure the room at a right angle to the direction of the flooring, calculate the number of planks required to fit, and, if necessary, cut plank widths in the first row to a smaller size.



You may want to position a few rows before starting installation to confirm your layout decision and working line.

When laying flooring, stagger plank end joints row by row by at least 8" (20 cm). You can use the cut-off end to begin the next row when cutting the last plank in a row to fit. If cut-off end is less than 8", discard it and instead cut a new plank at a random length (at least 8" in length) and use it to start the next row.

Always begin each row from the same side of the room and ensure that minimum $\frac{3}{8}$ " spacers are placed at ends and edges where planks meet the wall. The tongue side of the plank should face the starting wall.

As installation proceeds, cut the last plank in each row allowing for the min required $\frac{3}{8}$ " expansion space, and continue to check that both long edge and end joints are locked, secure and have not shifted during this process.

As installation proceeds, the installer/owner should inspect and approve each piece that will be used in the flooring installation.

The installer must use reasonable selectivity and hold out or cut off pieces with defects that fall within manufacturing tolerance levels, whatever the cause. McMillan Floors. cannot honor claims due to a lack of on-site flooring inspection and acceptance by the installer/owner.



SET SPACERS

Create the required expansion space between planks and perimeter walls using $\frac{3}{8}$ " spacers on short and long ends of plank. For rooms wider than 50', a $\frac{1}{2}$ " expansion space is required. Do not remove expansion spacers until installation is complete.



INSTALL FIRST PLANK

Position the first plank against the $\frac{3}{8}$ " wall spacers along the starting wall beginning at the corner of the room. Tongue side of the plank should be facing the starting wall.



LOCK END JOINTS

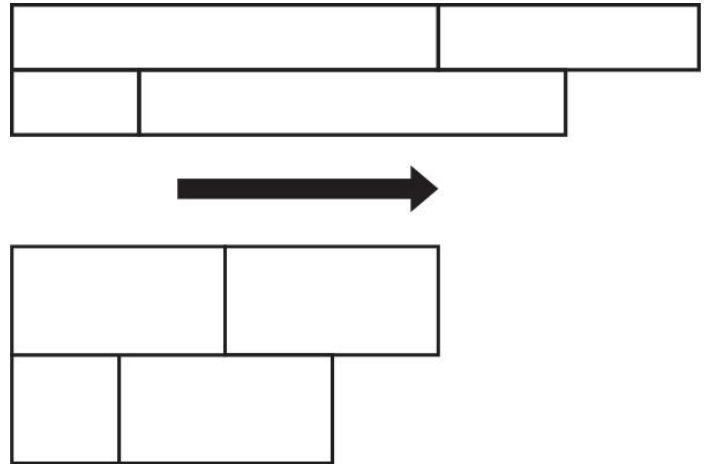
Install the next plank of the first row, locking the short end of the plank to the first by inserting the tongue into the groove at an angle and dropping in place. Continue installing each plank until the end of the first row is complete. Cut the last plank of the first row as needed to fit.





ESTABLISH PLANK STAGGERING

For random length installations, there must be at least an 8" stagger from row to row throughout the entire installation. For a brick laid pattern for fixed length floors, planks should be offset by 1/2 their length and laid accordingly.



FIRST PLANK, SECOND ROW

For random length installation, cut the first plank for the second row to 1/3 its length and insert the long tongue edge of the plank into the long edge groove of the first row plank. Make sure there are no gaps between planks. Use a pull bar as needed to close tightly.



SECOND PLANK, SECOND ROW

Insert the short tongue of a new plank into the short groove of the previously cut plank and then insert the long tongue edge of the two attached pieces at the same time into the groove of the first row. Use the pull bar as needed to ensure a tight fit.



CONTINUE SECOND ROW

Lock the long edge of the plank by inserting the tongue into the groove at an angle and drop in place. Slide plank toward the end of previously installed plank until the tongue just touches the groove. Use tapping block gently on the short and long edge to ensure a tight fit.



LOCKING PLANKS INTO PLACE

Tap ends of plank with rubber mallet and tapping block gently to lock ends of planks together. Be sure to tap on short end groove sides of panels to avoid damaging the locking profile. Use a pull bar on the long edge of the plank to ensure tight fit.



INSTALL REMAINING ROWS

Insert the short tongue of a new plank into the short groove of the previously cut plank. Place the short, cut edge against a spacer and insert the long, tongue edge of the two attached pieces at the same time and continue the process until completion.





FINISH THE JOB

Remove spacers . Cover expansion space with baseboard, quarter round or other trim as desired. Use flexible caulking to fill expansion gap around bathtubs or showers. Make sure not to pin down the floor underneath molding.



FINISHING THE JOB

Remove expansion spacers from the perimeter. Install or reinstall baseboard and/or quarter round moldings to cover expansion space. For bathtubs or showers where standard molding cannot be installed, use flexible caulking in its place.

Install transition pieces such as reducer strips and t-moldings as needed. T-moldings are required at all doorways for commercial installations, being careful not to pin the floor underneath.

Clean and remove all dirt and debris from your new floor by dust mopping or vacuuming.

If needed, cover your newly installed floors with rosin paper to protect them while other trades are working. Clean the floor thoroughly before laying the rosin paper to ensure that no debris is trapped underneath.

When installed on subfloor DO NOT USE plastic film or other non-breathing coverings as this can cause increased humidity. Overlap rosin paper on long edges and seal with tape to prevent debris from getting underneath.

Secure rosin paper at walls by taping to trim, avoiding adhesive tape contact with the flooring surface. Heavy furniture should be moved onto the newly installed floor using an appliance hand truck over hardboard runways.