

INSTALLATION GUIDELINES FOR FIRMFIT™ FLOORING

Thank you for choosing FIRMFIT™ flooring. When properly installed and cared for, your new flooring will be easy to maintain and will keep its great look for years.

WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEAD-BLAST OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC “CUTBACK” ADHESIVES OR OTHER ADHESIVES.

These products may contain either asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product is a non-asbestos-containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication Recommended Work Practices for Removal of Resilient Floor Coverings for detailed information and instructions on removing all resilient covering structures. For current information go to www.rfci.com.

Please read all the instructions before you begin the installation. Improper installation will void warranty.

I. GENERAL PREPARATIONS

IMPORTANT NOTICE

After installation, make sure that FIRMFIT™ is not be exposed to temperatures less than 0°F (-15°C) or greater than 140°F (60°C).

For temperature below 0°F (-15°C) FIRMFIT™ flooring must be glued-down with a premium vinyl adhesive specifically approved for sub-zero temperatures using a 'wet-set' installation method. For glue-down method follow adhesive manufacture installation instructions.

When employing the direct glue down installation method, DO NOT include a 6-mil poly-film vapor barrier in the assembly. Flooring material must be adhered directly to the subfloor. Flooring should NEVER be glued to a poly-film vapor barrier.

TOOLS REQUIRED: Spacers, rubber mallet, ruler, pencil, tape measure, utility knife.

- Prior to installation, inspect material in daylight for visible faults/damage. No claims on surface defects will be accepted after installation.
- It is preferable to lay boards following the direction of the main source of light. For the best result, make sure to always work from 2 to 3 cartons at a time, mixing the planks during the installation.
- Check if subfloor/site conditions comply with the specifications described in these instructions. If you are not satisfied, do not install, and contact your supplier.
- Flooring products can be damaged by rough handling before installation. Exercise care when handling and transporting these products. Store, transport and handle the flooring planks in a manner to prevent any damage. Store cartons flat, never on edge.

- Flooring products can be heavy and bulky. Always use proper lifting techniques when handling these products. Whenever possible, make use of material-handling equipment such as dollies or material carts. Never lift more than you can safely handle; get assistance.
- Calculate the room surface prior to installation and plan an extra 5% of flooring for cutting waste.
- The environment where FIRMFIT™ is to be installed is critically important with regard to successful installation and continued performance of the flooring products. FIRMFIT™ is intended to be installed in interior locations only. These interior locations must meet climatic and structural requirements as well.
- Flooring should only be installed in temperature-controlled environments. It is necessary to maintain a constant temperature before, during and after the installation. Portable heaters are not recommended as they may not heat the room and subfloor sufficiently. Kerosene heaters should never be used.
- This product does not need acclimation.
- For floor surfaces exceeding 6400ft² (620m²) and/or lengths exceeding 80 lineal feet (25m), use expansion moldings.

IMPORTANT NOTICE

Flooring may be installed with a direct glue-down method on approved wooden (or) concrete substrates that are on or above grade only. Use only premium pressure-sensitive vinyl flooring adhesive. Please consult with adhesive manufacturer to determine if suitable for use with this material.
For glue down method follow adhesive manufacture installation instructions.

II. SUBFLOOR INFORMATION

- Inspect your subfloor before you begin, it must be clean, dry and level to 3/16" (5mm) within 10 feet (3 meters). Substrates must be free from excessive moisture or alkali. Remove dirt, paint, varnish, wax, oils, solvents, any foreign matter and contaminates.
- Do not use products containing petroleum, solvents or citrus oils to prepare substrates as they can cause staining and expansion of the new flooring.
- Although this floor is waterproof, it is not aimed to be used as a moisture barrier. The subfloor must be dry (max 2.5% moisture content - CM method). This product is also not to be installed in areas that have a risk of flooding such as saunas or outdoor areas.

IMPORTANT NOTICE

Radiant Heat: Radiant heat systems must have a minimum of 1/2" separation from the product. Maximum operating temperature should never exceed 85°F (30°C). Use of an in-floor temperature sensor is recommended to avoid overheating.

In-floor Radiant Heat: FIRMFIT™ can be installed over 1/2" embedded radiant heat using the floating or glue down method.

When employing the direct glue-down installation method, DO NOT include a 6-mil poly-film vapor barrier in the assembly. Flooring material must be adhered directly to the subfloor. Flooring should NEVER be glued to a poly-film vapor barrier.

- Turn the heat off for 24 hours before, during and 24 hours after installation when installing over radiant heated subfloors.

- Failure to turn the heat off may result in significantly shortened working time of the adhesive.
- 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. The maximum moisture content of the screed is 1.5% (CM method).
- Make sure that the temperature in the room is at least 60°F (15°C) during installation.
- Floor temperature must not exceed 85°F (30°C).
- Once the installation has been completed, the heating system should be turned on and increased gradually (5°F increments) until returning to normal operating conditions.
- Refer to the radiant heat system's manufacturer recommendations for additional guidance.
- Failure to strictly follow adhesive manufacturer's guidelines may result in failure and void the warranty.

Warning: Electric heating mats that are not embedded into the subfloor are not recommended for use underneath FIRMFIT™ floors. Using electric heating mats that are not embedded and applied directly underneath FIRMFIT™ floors could void the warranty for your floor in case of failure. It is best to install FIRMFIT™ flooring over embedded radiant floor heating systems and adhere to the guidelines listed above.

WOOD SUBFLOORS

- If this flooring is intended to be installed over an existing wooden floor, it is recommended to repair any loose boards or squeaks before you begin the installation.
- Nail or screw every 6" (15 cm) along joists to avoid squeaking.
- Basements and crawl spaces must be dry. Use of a 6-mil black polyethylene is required to cover 100% of the crawl space earth.
- We recommend laying on wooden floors crossways to the existing floorboards.
- All other subfloors - Plywood, OSB, particleboard, chipboard, wafer board, etc. must be structurally sound and must be installed following their manufacturer's recommendations.

CONCRETE SUBFLOORS

- Floors must be fully cured, at least 60 days old, smooth, permanently dry, clean, and free of all foreign material such as dust, wax, solvents, paint, grease, oils, and old adhesive residue. Curing agents and hardeners could cause bonding failure and should not be used.
- We recommend using a minimum 6-mil poly-film as a moisture barrier between the concrete subfloor and the flooring.
- Depressions, deep grooves, expansion joints and other subfloor imperfections must be filled with patching & leveling compound.
- Concrete substrates must be flat within 1/8 of an inch (3mm) within a 6-foot (2 meters) radius, or 3/16 of an inch (5mm) within a 10-foot radius (3 meters). The substrate should not slope more than 1 inch (2.5cm) per 6 feet (2 meters) in any direction.
- Moisture and alkalinity tests should be performed on all concrete substrates regardless of grade level or age of slab. Perform either ASTM F2170 In-Situ Relative Humidity (RH)

test or ASTM F1869 Calcium Chloride Moisture Test (MVER: Moisture Vapor Emission Rating). Perform pH test per ASTM F710 to determine alkalinity of the slab.

- Moisture emission from subfloor cannot exceed 5 lbs. per 1,000 sq. ft. per 24 hours as measured with the calcium chloride test in accordance with ASTM F1869-04 or ASTM F2170 In-Situ Relative Humidity not to exceed 80%. If results are higher than referenced, then a minimum 6mil polyethylene plastic moisture barrier must be applied.
- The Limited Warranty does not cover discoloration from mold or from flooding, floods, leaking plumbing or appliances, water entering through sliding glass doorways, as well as floor covering failure due to hydrostatic pressure or moisture vapor emission.

EXISTING FLOORS

- FIRMFIT[™] flooring can be installed over most existing hard surface floor coverings, provided that the existing floor surface is clean, flat, dry, securely fastened, and structurally sound.
- Existing sheet vinyl floors should not be heavily cushioned and not exceed more than one layer in thickness. Soft underlayment and soft substrates will diminish the products inherent strength in resisting indentations.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor, may affect the new floor covering.

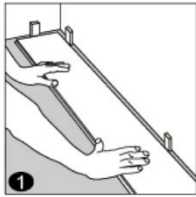
DO NOT INSTALL OVER

- Hardwood flooring / wood subfloors that lay directly on concrete or over dimensional lumber or plywood used over concrete.
- Any type of carpet.
- Existing cushion-backed vinyl flooring.
- Floating floor of any type, loose lay, and perimeter fastened sheet vinyl.

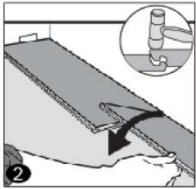
III. INSTALLATION

- Remove baseboard, quarter-round moldings, wall base, appliances and furniture from room. For best results, door trim should be under-cut to allow flooring to move freely without being pinched. After preparation work, sweep and vacuum the entire work area to remove all dust and debris.
- With a floating floor, you must always ensure you leave a 1/4" (6mm) gap between walls and fixtures such as pipes and pillars, stairs, etc. These gaps will be covered with trim moldings after the floor is installed. Tip: When installing around pipes, drill the holes 1/2" (12mm) larger than the diameter of the pipes.
- Whenever possible, plan the layout so that the joints in the planks do not fall on top of joints or seams in the existing substrate. The end joints of the planks should be staggered a minimum of 8" (20.32 cm) apart. Do not install over expansion joints. Avoid installing pieces shorter than 12" (30 cm) at beginning or end of rows.
- Do not install your kitchen cabinets directly over your FIRMFIT[™] floor. FIRMFIT[™] quality can be guaranteed as long as the floor can move freely.
- Decide the installation direction. It is recommended to install the length direction of the planks parallel to the main light direction.

- Measure the area to be installed: The board width of the last row shall not be less than 2" (50mm). If so, adjust the width of the first row to be installed. In narrow hallways, it is recommended to install the floor parallel to the length of the hall.



After thoroughly cleaning the subfloor, you should begin laying from left to right. Position the first plank so that grooved edge is facing you. Place the floorboard 1/4" (6mm) from the left wall. Use spacers between the wall and the floorboard.

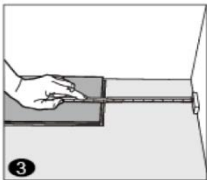


Second plank, first row. Drop the plank and gently tap down the end with a rubber mallet so it firmly locks into the previous plank until both are at the same height. Make sure both planks are perfectly aligned. Continue installing the first row until you reach the wall on the right.

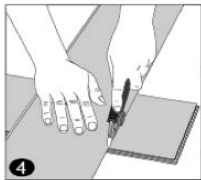
IMPORTANT NOTICE

If you notice both planks aren't at the same height or are not well locked together, please follow the disassembling instructions at the bottom of the page, disassemble and check if any debris stuck inside the lock is obstructing.

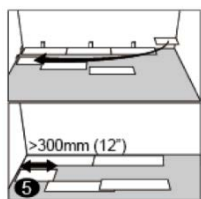
Failure to properly line up the end joint and attempting to force it in while out of alignment could result in permanent damage to the end joint.



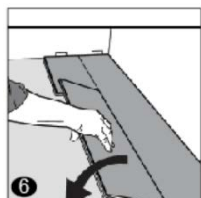
At the end of the first row, leave an expansion gap of 1/4" (6mm) to the wall and measure the length of the last plank to fit.



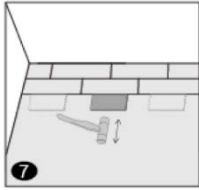
To cut the plank, use a simple utility knife and ruler, and with the top side facing up, cut heavily and several times on the same axis. The knife will not go through the surface but make a deep cut. You can then lift one half of the plank using your other hand to hold down the second placing it very close to the cut. The plank will split naturally.



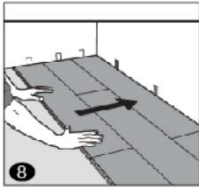
Start the second row with the leftover cut part of the last plank of the previous row. This small plank should measure at least 12" (30cm). Otherwise, cut a new plank in half and use it to begin the second row. The end joints of each adjoining row should not be closer than 8" (20cm) to each other. Whenever practical, use the piece cut from the preceding row to start the next row. End joints of all planks should be staggered 6" or more.



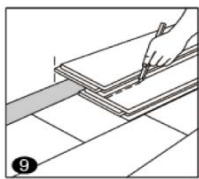
Click the long side of the plank into the previous row and place it tight to the short end of the previous plank with an angle of 30 degrees. Drop the plank and gently tap on the end with a rubber mallet so it firmly locks into the previous plank until both are at the same height. Make sure both planks are perfectly aligned.



After finishing the installation of every row, use scrap pieces and a small hammer or rubber mallet to gently tap the planks into the click of the previous row to make sure they are tightly clicked together and make sure there is no gap between the long side of the planks installed. Any gapping can compromise the whole installation.



After the first 2-3 rows of planks are installed, they should be checked with a string line to ensure that rows are still running straight. If they are not, it could be that the starting wall has some irregularities that caused bowing in the installation. If so, the starting row of planks may have to be scribed and re-trimmed to account for any unevenness in the wall. This can be done without having to disassemble the beginning rows.



To lay the last row: position a loose board exactly on top of the last row laid. Place another board on top, with the tongue side touching the wall. Draw a line along the edge of this boards, to mark the first board. Cut along the edge of this board to mark the first board. Cut along this line to obtain the required width. Insert this cut board against the wall. The last row should be at least 2" (50mm) wide. The spacers can then be removed.



Holes for pipes: measure the diameter of the pipe and drill a hole that is 1/2" (12mm) larger. Saw off a piece as shown in the figure and lay the board in place on the floor. Then lay the sawed-off piece in place.



Door molding and skirting: lay a board (with the decorative side down) next to the door molding and saw as shown in the figure. Then slide the floorboard under molding.

FINISHING THE INSTALLATION

Replace molding or wall base, allowing slight clearance between the molding and the planks. Nail the molding to the wall surface, not through the flooring. At doorways and at other areas where the flooring planks may meet other flooring surfaces, it is preferable to use a "T" molding, or similar, to cover the exposed edge but not pinch the planks. Leave a small gap between the planks and the adjoining surface.

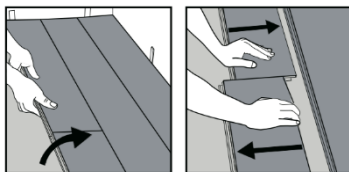
IV. MAINTENANCE

- Sweep or vacuum daily using soft bristle attachments.
- Clean up spills and excessive liquids immediately.
- Damp mop as needed and use cleaners recommended for vinyl flooring.
- Use proper floor protection devices such as felt protectors under furniture.
- Place a walk-off mat at outside entrances to reduce the amount of dirt brought into your home. Do not use mats with a latex or rubber backing since these backings can cause permanent discoloration.
- Do not use abrasive cleaners, bleach or wax to maintain the floor.
- Do not drag or slide heavy objects across the floor.

PREVENTIVE CARE

- When moving appliances or heavy furniture it is always wise to lay a plywood panel, or similar, on your floor and “walk” the item across it. This protects your floor from scuffing, gouging and tears.
- Frequently moved furniture should be equipped with felt pads to avoid scratching the floor. Heavy furniture and appliances should be equipped with non-staining large surface floor protectors. Furniture with castors or wheels must be easy swiveling, large surface non-staining and suitable for resilient floors. Do NOT use ball type castors as they can damage the floor.
- Caster wheeled chairs should have wide, rubber casters. Place protective mats under office chairs.
- Use floor protectors under furniture to reduce indentation. As a general rule of thumb, the heavier the item, the wider the floor protector needed.

V. DISASSEMBLING



Separate the whole row by lifting it up delicately at an angle. To separate the planks, leave them flat on the ground and slide them apart. If planks do not separate easy, you can slightly lift up the planks (5°) when sliding them apart.