

Perform Luxury Vinyl Flooring™ INSTALLATION INSTRUCTIONS

CONTENTS:

1. PRE-INSTALLATION INSTALLATIONS
2. MATERIAL STORAGE AND HANDLING
3. SUBSTRATES
4. ADHESIVES
5. INSTALLATION
6. POST-INSTALLATION
7. WARRANTY

NOTE: This document may have been updated and revised. Visit floorfx.com for the most current version of this guide, warranty information, and maintenance guidelines.

REQUIRED MATERIALS:

- Adhesive (see Adhesives section for more details)

RECOMMENDED TOOLS AND MATERIALS:

- Safety glasses
- Measuring tape
- Square
- Roller
- Utility knife
- Pen
- Primer, if applicable (see Adhesives section for more details)
- Vinyl plank cutter, if desired

RECOMMENDED TOOLS AND MATERIALS FOR FLOOR PREPARATION, IF APPLICABLE

- Floor patching compound
- Trowel
- Embossing leveler
- Scraper
- Grinder

PRE-INSTALLATION INSTRUCTIONS

IMPORTANT: All substrates must be tested for moisture before installation.

Concrete Substrates

All concrete substrates should be tested for IRH (Internal Relative Humidity) according to ASTM F 2170.

Calcium Chloride tests may also be conducted, in addition to IRH, and must be performed according to ASTM F 1869.

NOTE: NEW AND EXISTING CONCRETE SUBFLOORS SHOULD MEET THE GUIDELINES OF THE LATEST EDITION OF ACI 302 AND ASTM F 710, "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING" AVAILABLE FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, 610-832-9585, [HTTP://WWW.ASTM.ORG](http://www.astm.org).

- Substrates shall be smooth, structurally sound, permanently dry, clean and free of all foreign material such as dust, wax, solvents, paint, grease, oils, old adhesive residue, curing and hardening/curing compounds, sealers and other foreign material that might prevent adhesive bond.
- Concrete floors shall be flat and smooth within 1/8" in 6 feet or 3/16" in 10 feet.
- ASTM F 2170 IRH (Internal Relative Humidity) are required for the Perform Luxury Vinyl warranty. Three tests must be conducted for areas up to 1000 SF, and one additional test, for each additional 1000 SF.
- Use only Portland based patching and leveling compounds. Do not install Perform Luxury Vinyl flooring over gypsum based patching and/or leveling compounds.
- Perform Bond testing to determine compatibility of adhesive to the substrate. A primer can be utilized to promote adhesion.
- Areas should be adequately lighted during all phases of the installation process.
- It is recommended that resilient floor covering installation shall not begin until all other trades have completed.

Ambient Temperature

Controlled environments are critical to the performance and successful installation of Perform Luxury Vinyl. Fully functional HVAC systems, prior to installation, are the best way to ensure temperature and humidity control.

- DO NOT install Perform Luxury Vinyl flooring until the work area can be temperature controlled.
- The permanent HVAC system must be turned on and set to a minimum of 65°F (20°C) or a maximum of 85°F, for a minimum of 7 days prior to, during, and after installation. Once the installation is complete the temperature should not exceed 85°F.

PH

Concrete floors must be tested per the latest edition of ASTM F 710.

- PH reading must not exceed 9.0.
- Readings below 5.0 and in excess of 9.0 affect resilient flooring and adhesives negatively.
- Rinsing the surface with clear water may lower alkalinity.
- An acrylic solution can be utilized to correct high PH readings.

NOTE: IT MAY NOT BE THE FLOOR COVERING INSTALLER'S RESPONSIBILITY TO CONDUCT THESE TESTS. IT IS, HOWEVER, THE FLOOR COVERING INSTALLER'S RESPONSIBILITY TO MAKE SURE THESE TESTS HAVE BEEN CONDUCTED, AND THAT THE RESULTS ARE ACCEPTABLE PRIOR TO INSTALLING THE FLOOR COVERING. WHEN MOISTURE TESTS ARE CONDUCTED, IT INDICATES THE CONDITIONS ONLY AT THE TIME OF THE TEST.

MATERIAL STORAGE AND HANDLING

- Perform Luxury Vinyl and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to installation.
- Store cartons of tile or plank products flat and squarely on top of one another. Tile or plank products should not be stacked more than 5 cartons high. Preferably, stack material in the "center" of the installation area (i.e. away from vents, direct sunlight, etc). Storing cartons in direct sunlight could affect proper acclimation by inducing thermal expansion/contraction.
- Do not stack pallet's 2 high unless utilizing 1" thick plywood in between pallets.

SUBSTRATES

Important

All substrates to receive resilient flooring shall be dry, clean, smooth and structurally sound. They shall be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, curing, sealing, hardening/parting compounds, alkaline salts, excessive carbonation/laitance, mold, mildew, and other foreign materials that might prevent the adhesive from bonding.

WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST 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.

Wood Substrates

Wood subfloors must be structurally sound and in compliance with local building codes.

- Double-Layered APA rated plywood subfloors should be a minimum 1" total thickness, with at least 18" well ventilated air space beneath.
- Crawl spaces must be insulated and protected with a vapor barrier covering the ground.
- Do not install over sleeper construction subfloors or wood subfloors applied directly over concrete.
- Underlayment panels can only correct minor deficiencies in the sub-floor while providing a smooth, sound surface on which to adhere the resilient flooring.
- Any failures in the performance of the underlayment panel rest with the panel manufacturer.
- It is recommended that your chosen APA underlayment grade panels be designed for installation under resilient flooring, and carry a written warranty covering replacement of the entire flooring system.
- Perform Luxury Vinyl flooring is not recommended directly over fire-retardant treated plywood or preservative treated plywood.
- The materials used to treat the plywood may cause problems with adhesive bonding. An additional layer of APA rated 1/4" thick underlayment should be installed.
- Always follow the underlayment manufacturer's installation instructions.

Concrete

- New or existing concrete subfloors must meet the guidelines of the latest edition of ACI 302 and ASTM F 710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".
- On or below-grade slabs must have an effective vapor retarder directly under the slab.
- Wet curing 7 days is the preferred method for curing new concrete.
- Do not use curing compounds. If present they can interfere with the bond of the adhesive to the concrete. Seek assistance from an underlayment manufacturer if curing agents are detected.
- Remove curing compounds 28 days after placement, so concrete can begin drying.
- Concrete floors shall be flat and smooth within 1/8" in 6 feet or 3/16" in 10 feet.

Note: Perform Bond testing to determine compatibility of adhesive to the substrate. A primer can be utilized to promote adhesion.

Expansion joints in concrete are designed to allow for the expansion and contraction of the concrete. Resilient flooring products should never be installed over expansion joints.

Expansion joint covers designed for use with resilient floorings should be used. Control joints (saw cuts) may be patched and covered with resilient once the concrete is thoroughly cured, dry and acclimated.

Gypsum Substrates

Perform may be installed over flooring grade gypsum subfloors when properly installed over a subfloor that is structurally sound and flat within 3/16" per 10 foot radius (4.7 mm per 3 m).

Gypsum and lightweight concrete substrates should be in accordance with the listed standards listed in section A below. Unprimed gypsum substrates may have a dusty surface and be porous, which will lead to an adhesion bond failure if not properly sealed and treaded. It is the responsibility of the installation contractor to obtain verification from the general contractor or responsible party that the gypsum was properly sealed with the gypsum manufacturer's recommended sealer. Conduct testing according to the appropriate ASTM Test Method for Gypsum Surfaces.

- a. Gypsum surfaces shall be in accordance with and properly prepared in accordance to the appropriate ASTM specifications listed above.
- b. Conduct a surface porosity test to ensure the surface has been properly sealed. If the water is quickly absorbed, stop installation and contact FloorFX Technical Services at 503-222-0745.
- c. Check moisture content of the gypsum substrate via the appropriate method according to the ASTM standards listed above. Moisture content of the substrate shall not exceed the adhesive requirement or 75% RH or 3 lbs/1,000 sf/24 hours MVER. When using the D4263 Test Method, no discoloration of the surface should be seen.
- d. All patching compounds must be recommended for use with gypsum, gypcrete, or lightweight concrete surfaces by the patch compound manufacturer. Follow the manufacturer's instructions regarding use, mixing, and application.
- e. All gypsum surfaces must be properly primed according to the gypsum manufacturer's instructions, or when there are no instructions, follow the instructions from the adhesive manufacturer.

Existing Resilient Flooring

- Must be single layered, non-cushion backed, fully adhered, and smooth. Show no signs of moisture or alkalinity.
- Waxes, polishes, grease, grime, and oil must be removed.
- Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.

Embossing leveler recommended to aid in proper bonding and to prevent telegraphing.

- Do not install over rubber based substrates.

NOTE: THE RESPONSIBILITY OF DETERMINING IF THE EXISTING FLOORING IS SUITABLE TO BE INSTALLED OVER TOP OF WITH RESILIENT, RESTS SOLELY WITH INSTALLER/FLOORING CONTRACTOR ON SITE. IF THERE IS ANY DOUBT AS TO SUITABILITY, THE EXISTING FLOORING SHOULD BE REMOVED, OR AN ACCEPTABLE UNDERLAYMENT INSTALLED OVER IT. INSTALLATIONS OVER EXISTING RESILIENT FLOORING MAY BE MORE SUSCEPTIBLE TO INDENTATION.

Quarry Tile, Terrazzo, Ceramic Tile

- Must be totally cured and well bonded to the concrete.
- Must be free of any residual solvents and petroleum derivatives.
- Waxes, polishes, grease, grime, and oil must be removed.
- Show no signs of moisture or alkalinity.
- Cuts, cracks, gouges, dents, and other irregularities in the existing floor covering must be repaired or replaced.
- Fill any low spots, holes, chips and seams that may telegraph through the new flooring.
- Grind any highly polished or irregular surfaces.
- Quarry tile or Ceramic tile grout joints and textured surfaces must be filled with an embossing leveler.

Old Adhesive Residue

- If the adhesive residue is asphalt-based (cut-back), or any other type of adhesive is present, it must be dealt with in one of two ways:
 - a. It may be mechanically removed such as: bead blasting or scarifying
 - b. Or, a self-leveling Portland based underlayment may be applied over it. Check with the substrate manufacturer for suitability, application instructions, and warranties.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in/on the sub-floor may affect the new adhesive and floor covering.

ADHESIVES

Refer to adhesive label for correct trowel requirements, spread rates and application instructions.

Approved adhesives & primers include:

- FloorFX PRE-FLEX Primer
- FloorFX FLEX 3022 Pressure Sensitive Adhesive
- FloorFX FLEX SP Aerosol Flooring Adhesive

IMPORTANT: It is highly recommended to perform a bond test in order to determine adhesive working time per job site conditions.

The strength of the bond test will determine if floor primer is necessary.

INSTALLATION

General Notes

- Ensure that moisture tests have been conducted and that results do not exceed the acceptable moisture limit for the adhesive used.
- PH of concrete sub-floor must be between 5 and 9.
- The permanent HVAC system is turned on and set to a minimum of 65°F (20°C) or a maximum of 85°F, for a minimum of 72 hours prior to, during and after installation. After installation, the maximum temperature should not exceed 85°F.
- Do not stack more than 5 cartons high.
- Flooring material and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to the commencement of installation.
- Follow instructions on the adhesive label for porous or non-porous subfloor by using the appropriate trowel size.
- Material must always be inspected prior to installation. Any material installed with visual defects will not be considered as a legitimate claim as it pertains to labor costs.
- Install tiles running in same direction.
- Ensure that all recommendations for sub-floor and jobsite conditions are met prior to beginning the installation. Directional designs are optional.

Layout and Installation General Rules

- Install using conventional tile and plank installation techniques. Plank products should have a minimum of 6 – 8" seam stagger.
- Carefully determine where to begin tile or plank installation.
- It is customary to center rooms and hallways so borders are not less than half a tile or plank.
- Work out of multiple boxes at a time.
- In hallways and small spaces, it may be easier to work lengthwise from one end using a center reference line as a guide.
- Ensure cut edges are always against the wall.
- To properly cut LVT products score the top side of the material with a utility knife. Bend the product and finish the cut through the backside. This will ensure the cleanest cut. It may be necessary to use a heat gun to cut around vertical obstructions. Allow the heated LVT to return to room temperature before installing.
- Cutting the product into a fine point may lead to delamination. Use an ethyl cyanoacrylate based super glue to help fuse the LVT point together. Be sure to clean all glue from the top surface immediately. Alcohol based super glues may cause vinyl to swell.

NOTE: It is recommended to use floor protection after installation. Do not use a plastic adhesive based protection product.

Tile Installation

Layout of the Room for Squarely Laid Fields

To square the area to be covered, first find the center of one end of the main rectangle. Locate the same point at the other end wall. Snap a chalk line between these points to mark the center line on the floor. Then measure along this center line to find the middle of the room. At the center point, mark off a line across the room at exactly right angles to the first line. This may be accomplished by the 3-4-5- triangle method. Then measure 4 feet toward each side wall from the center point. Then measure 3 feet from the center point along the longer line, measure exactly 5 feet from the 3 foot mark on the center line to the 4 foot mark on the cross line. If the 5 foot measurements do not come out exactly 5 feet, the center crossing lines are not at a true right angle. For large rooms, multiples of the above dimensions may be used to obtain greater accuracy. (6-8-10 or 9-12-15, etc.) Dry-lay a row of tiles from the center line to the side wall to determine the space left for the borders. If the resulting border is too small, move the starting point over a half tile width so that it straddles the center line. Repeat the same process lengthwise of the room. (This can also be figured out from the room dimensions without putting down the tiles if desired.)

If it is decided to have the center row of tiles straddle either or both of the center lines, additional guidelines should be snapped on the floor ½ tiles width on one side of either or both center lines as required. After the border widths have been determined and the center starting lines have been snapped spread the recommended adhesive on the center lines leaving portions of the lines at center and near each wall uncovered.

Spread the adhesive over one-half the area and after it is ready, start laying tile from the right angle formed in the center of the room by center lines.

Lay toward the two corners of the room as shown. Always refer to your guide lines as you progress with laying tile so that any mistake can be corrected before it is too late.

It may be necessary to compromise on the rightness of joints to make allowances for unevenness or waves of the subfloor.

Make sure to place tile as accurately as possible without sliding them into place.

IMPORTANT: All flooring must be rolled with a minimum 100-lb roller after installation.

Plank Installation

Layout of the Room

- Find the center point of the room. Strike a line.
- Obtain a true 90° angle by using a carpenter's square.

- Strike a second line which will divide the room in to four equal parts.
- Measure the distance from the center to the wall, parallel to the direction of the plank.
- Divide the measurement by the width of the plank. If less than half remains as the border plank, adjust the point to compensate. This will give a larger border along the wall and reduce the chance of having to cut a small sliver of flooring to place along the wall.

Layout of the Plank

- Carefully place the first piece of plank at the junction of the chalk lines.
- Continue to lay the plank, making sure each plank flush against the chalk line and tight against the adjoining plank.
- Make sure the plank is well seated into the adhesive paying special attention, to the edges. Lay row by row, or in a pyramid fashion as shown below.

Fitting the Border

- Measure the distance from the last plank in the row to the wall.
- Mark the plank and cut it against the mark.
- Lay the plank in place, making sure that the cut edge is against the wall.

IMPORTANT: All flooring must be rolled with a minimum 100-lb roller after installation.

POST-INSTALLATION

Follow Perform Maintenance Instructions found at floorfx.com.

Important Notices

- Use plywood to cover the flooring when moving heavy furniture or appliances into position.
- Use floor protectors under the legs of furniture and chairs.
- Post-installation temperature must be maintained between 65 °F - 85 °F (18.3 °C - 29.4 °C).
- Relative humidity must be maintained between 40% and 60%.
- Avoid exposure to long periods of sunlight. FloorFX requires the use of UV protective film, blinds, curtains or shades to ensure Perform is protected from sun and are not overheated due to this exposure, which may cause buckling.

WARRANTY

For warranty information, visit floorfx.com.