



REQUIRED SUBSTRATE PREPARATION FOR ALL VPI FLOORING PRODUCTS

VPI Corporation

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Please note: In all cases, installations should comply with procedures outlined in ASTM Standards for installation, at a minimum. For procedures specific to VPI products, please refer to the instructions below or at www.vpicorp.com/product-installation-maintenance, for the most up-to-date recommended installation techniques.

GENERAL

IMPORTANT: Before proceeding with the installation, ensure that the proper floor preparation is completed and that the installer is familiar with VPI's installation procedures.

PREPARATION OF SUBFLOOR

CONCRETE, TERRAZZO, CERAMIC

Preparation of concrete floors should follow the procedures prescribed in ASTM F710. This guide is a supplement to, not a replacement for, the ASTM standard. Where deviations occur from the standard, however, the VPI-specific steps should be followed.

Sub floors must be structurally sound, dry, clean, and free of dirt, dust, wax, grease, paint, polish, oil, curing agents, parting compounds, surface hardeners, sealers, solvents, asphalt, old adhesives and all other materials that would interfere with a good surface to tile adhesion. Floor surfaces must be smooth and flat with a maximum variation of 1/8" in 10 feet. All cracks, depressions, and other imperfections must be repaired with a high quality, cementitious latex underlayment. **Gypsum-based underlayment products should not be used.** Any uncorrected sub floor irregularities may telegraph through the VPI flooring and be visible on the surface of the finished installation.

New concrete must be properly cured and tested according to ASTM F-2170 Humidity in Concrete in Situ and ASTM F-2420 Humidity on the surface of the concrete or ASTM 1869 the calcium chloride test procedure. A drying time of 6 weeks is generally required after the slab is poured and protected from the weather. Lightweight aggregate concrete floors, and flooring with steel or plastic pan construction, and floors poured over a permanent moisture barrier usually require an extended drying time. If lightweight aggregate concrete weighs less than 90 pounds per cubic foot, a topping of regular concrete at least one inch thick is required. To expedite the drying time there should be adequate heat and ventilation provided ready at the site.

VPI's warranty will not apply if the rate of moisture emission from the sub floor exceeds 5 pounds per 1000 square feet with in a 24 hour time frame of the test installation or at any future time.

It is the responsibility of the flooring contractor to determine if the floor is sufficiently dry for covering.

A concrete floor where moisture is present may be susceptible to elevated pH levels due to excessive alkaline salts. All adhesives are subject to deterioration resulting in bond failure when alkalinity is present. The alkalinity levels should be held between 5 and 8 pH. If the levels are higher than an 8 pH, the floor will need to be neutralized with one part muriatic acid to 9 parts water. Be sure to rinse the floor thoroughly with a neutralizing solution for 1 hr. and remove the neutralizing solution with wet shop vacuum, then rinse with a clear water rinse. Let the floor dry thoroughly, retesting the floors pH value, repeating the neutralizing process if necessary.

VPI recommends that moisture tests be taken on all concrete floors prior to the installation of floor tile to determine moisture emission. Use the following guidelines to determine the number of tests to be taken simultaneously.

1 test for areas up to 250 sq.ft.

2 tests for areas of 250 - 500 sq.ft.

3 tests for areas of 500 -1000 sq.ft.

4 tests for areas of 1000 - 5000 sq.ft.



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Read and understand the Adhesive Properties chart for specific details (RH, pH, MVER) for each type of adhesive being used for your project under consideration. This information is found under performance properties / adhesives. **Read the Adhesive Quick Chart** for surface and subfloor application also found under performance properties / adhesives. This will help determine other factors in your adhesive requirements.

Terrazzo floors may have a sealer or film on the surface. This must be removed before proceeding with the installation of tile. Ceramic tile must be solidly adhered. Any loose tile must be removed. Thoroughly clean existing ceramic tile using a 15% muriatic acid/water solution. If grout lines are filled with foreign matter, a stronger solution should be used.

Wet the entire floor with the mixture and scrub thoroughly. Allow the solution to remain on the floor for ten minutes and then remove the solution. Neutralize the floor by rinsing with clear water to which a few ounces of household ammonia have been added. After the floor has dried, apply a thin coat of ARDEX or equivalent cementitious floor underlayment to achieve a smooth surface.

Suspended

The installation of tiles on a suspended floor should be made using the correct VPI adhesive and trowel. Look for VPI's Adhesive Quick Chart found under performance properties / adhesives for detailed information.

On or Below Grade

VPI recommends that any new concrete slabs on or below grade should be poured over a permanent moisture barrier such as six-mil polyethylene film. Any concrete in contact with the earth or with less than 18" of cross-ventilated air space under the concrete is considered to be on grade. For specified VPI adhesive and trowel, see Adhesive Quick Chart for added details.

Radiant-Heated Floors

PRT, Rubber flooring and ESD floor tile can be installed over radiant heated floors at 65°-75°F. as the standard operating setting. Excessive radiant heat nearing the upper limit of 90°F temperature can impact the performance and the adhesion of your floor. Rubber flooring is an insulator and will take longer for the surface temperature to radiate.

WOOD FLOORS

Suspended Only VPI does not recommend any rubber flooring be installed over any wood products other than plywood with a min. thickness of 1/4" and must be construction grade materials.



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RESILIENT FLOORING

Existing Concrete

Remove all the old floor covering and sand off the adhesive. If the specific job conditions necessitate that the installation of the tile is over the resilient floor covering, use the following procedures:

1. The floor covering must be sound and tightly secured to the floor. Remove any loose or broken areas replacing them with sound material or with a good grade of cementitious latex underlayment, which should be used to level any floor irregularities or to fill in any open seams.
2. Thoroughly sand the surface with very rough sandpaper, using an edge sander next to the walls and in spots in the field where the regular sander may have skipped. Completely remove all old sealers and waxes to ensure an adequate bond.
3. You need to thoroughly sweep, vacuum, or damp mop the floor to remove all dust and grit. Any texture or embossing from the original installation not sanded properly may telegraph through the VPI Tile and be visible on the surface of the new installation.
4. Use the specified VPI adhesive and trowel for all installations.

On or Below Grade

Do not install tile over any resilient floor covering on or below grade. Remove old floor covering and sand off all the old adhesive.

METAL DECKS

Metal decking must be smooth, dry, clean, and free from dust, paint, asphalt, old adhesives, grease, oil, rust, and other extraneous material. Abrade the metal surface by sanding to create a scarified surface finish to improve bond strength. If needed level all surface irregularities with a good grade of cementitious latex underlayment. Lightly sand the surface for better adhesion. Use specified VPI adhesive and trowel.

CONVENTIONAL INSTALLATION

Install VPI floor products in accordance with the following procedures:

1. Read your instructions understand them for proper sub floor preparation before spreading any adhesive.
2. Document your floor preparation ASTM requirements RH, pH, MVER and Adhesive bond Test information.
3. Read your instructions for optional installations.
4. Read your instructions for initial maintenance requirements.
5. Check your maintenance instructions for glazing or surface finishes for the type of floor.
6. Read your instructions for weekly, monthly and yearly maintenance requirements. Or specific maintenance instructions for the type of product being installed.
7. Read your instructions for optional maintenance considerations.

OTHER TYPES OF INSTALLATIONS AND SUBSTRATES

For recommended procedures on other types of installations not covered in these instructions please contact VPI Technical Service at 1-800-874-4240