



SUBSTRATE PREPARATION and TESTING FOR CAPRI RESILIENT FLOORING

1. GENERAL GUIDELINES

- a. Space to receive floor coverings shall be well lit and shall have a fully operational climate control system. The substrate, the materials to be installed, and the room temperature shall be 70° F (+/- 5° F degrees) for three days (72 hours) before the materials are to be installed, during the time of installing and for three days (72 hours) after completion.
- b. Thereafter, temperature shall be a minimum of 55° F.
- c. All products including underlayment panels, patching compounds, adhesives and floor covering materials shall be acclimated to site conditions and stored in the area where they are to be installed for a minimum of 48 hours before installing, at 70° F (+/- 5° F degrees).
- d. To prevent damage to the finished floor coverings, floor covering shall be installed after all other trades have completed their work.
- e. All substrates shall be prepared so they are flat to 3/16" in 10 feet.

2. CONCRETE SLABS

Reference document is ASTM F 710, *Preparing Concrete Floors to Receive Resilient Floor Coverings**.

All concrete slabs must be DRY, CLEAN AND SMOOTH.

- a. DRY: All slabs, regardless of age or grade level, shall be tested for moisture and pH. Moisture testing shall be per Calcium Chloride test method (ASTM F 1869*) AND Relative Humidity test method (ASTM F 2170*). No other test method is acceptable. Do not install Capri floors if ASTM F 1869 test results exceed 3 lbs/1000 sq.ft/24 hours or if ASTM F 2170 results exceed 75% Relative Humidity or if pH is below 7 or above 10.
- b. CLEAN: Remove paint, old adhesive, curing compound, sealer, oil, dirt or other contaminants from the concrete surface because they can trap moisture in the slab or interfere with adhesive bond.
- c. SMOOTH: Per ASTM F 710, cracks, depressions, control joints or other non-moving joints, and other irregularities shall be filled or smoothed with latex patching or underlayment compound that be moisture-, mildew-, and alkali-resistant, and, for commercial installations, shall provide a minimum of 3000 psi compressive strength.

3. WOOD SUBFLOOR SYSTEMS

Reference document is ASTM F 1482 *Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring**.

- a. Wood subfloors shall be double layer construction with a minimum total thickness of one inch (1"), suspended at least 18" above the ground or above a concrete slab, with adequate cross ventilation. If plywood or other panel underlayment is installed directly over a concrete slab or over sleepers, there is a strong chance of the joints in the panels and/or the fasteners will be visible (telegraph) through the finished floor covering. Do not install Capri floors over plywood that is installed directly over concrete or over a "sleeper" system.
- b. Substrate to receive Capri flooring shall be underlayment grade plywood. Use a ¼" or thicker A.P.A. approved underlayment plywood that is recommended for the finished use of the floor (i.e. use commercial grade underlayment in commercial applications). Unacceptable substrates include, but are not limited to: Luan, plywood containing knots, existing floor coverings, hardwood floors, particleboard, and OSB.

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- c. Fasten, sand, and/or patch the joints of underlayment panels per manufacturer's guidelines. Underlayment staples are the preferred fastening method. If ¼' underlayment panels are fastened with screws, there is a risk of screw heads telegraphing.
- d. Plywood shall have moisture content appropriate for the region of installation and the "normal living conditions" of the building/space it is being installed in.
- e. Floor joists that are spaced greater than 16" on center may require more than the 1" minimum stated above.

4. GYPSUM UNDERLAYMENT

Reference Document: ASTM F 2419, *Installation of Thick Poured Gypsum Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring**. When installing resilient floors over Gypsum underlayment, **it is imperative that the underlayment manufacturer's instructions be followed.**

- a. Per ASTM F 710, for commercial use, underlayment shall have a minimum of 3000 psi compressive strength, and shall be of the recommended thickness based on the subfloor and the finished use of the space.
- b. Follow Gypsum underlayment manufacturer's instructions for the ratio of powder, sand, water and any other ingredients, and for adequate drying time.
- c. Test and prepare the surface per manufacturer's instructions.
- d. Test for relative humidity per ASTM F 2170. The relative humidity of the Gypsum underlayment shall be less than 75%. ASTM F 2170 is only acceptable method for test moisture in Gypsum underlayment.
- e. If moisture exceeds the requirements, contact the underlayment manufacturer for acceptable solutions.
- f. Cracks, expansion joints and uneven areas shall be filled with a material intended for that purpose.
- g. Apply primer/sealer as recommended by manufacturer.

5. RADIANT HEAT FLOORS

Provided the floor temperature will not exceed 85° F, most Capri floors can be installed over radiant heat systems. Electric mat systems cannot be installed directly beneath resilient floor coverings.

- a. Follow guidelines for concrete, wood or gypsum underlayments as explained in items 1-4 above.
- b. If using poured underlayment, follow underlayment manufacturer's instructions for drying time and topcoat/sealer application.
- c. Temperature of substrate must be 70° F (+/- 5° F) for 48 hours before and 48 hours after. This may require careful adjustments to the heating system before, during and after installation. When increasing the temperature after installation, do so in 5° increments, several hours apart.

***ASTM STANDARDS:** available from ASTM International

100 Barr Harbor Drive, PO Box 700, West Conshohocken, PA 19428-2959.

610-832-9585 (phone), 610-832-9555 (fax), or through the ASTM website (www.astm.org).