SECTION 096519 – RESILIENT TILE FLOORING

**PART 1 – GENERAL**

1. SUBMITTALS
   1. Product Specification
   2. Specification for Adhesive
   3. Floor Layouts
   4. Samples
   5. Schedule
   6. Qualifications for Installer
2. CLOSEOUT SUBMITTALS
   1. Maintenance Instructions
   2. Warranty
3. QUALITY ASSURANCE
   1. Environmental:
      1. FloorScore® Certified
      2. Environmental Product Declarations
      3. Health Product Declaration
   2. Installer Qualifications: Installer who has been trained in the installation of resilient sheet flooring.
   3. Mockups: Install 100 sf of product at designated location for architect review and approval.
4. MATERIAL STORAGE AND HANDLING
   1. Store tiles on a flat surface and squarely on top of one another.
   2. Store away from vents and direct sunlight.
   3. When palletizing, first place a 5/8” or thicker plywood on the pallet. Stack 2 rows high side by side with no airspace between. Then quarter turn for 2 rows side by side. Do not exceed 12 boxes high. If you are stacking pallets, use a 1” thick plywood in between pallets.
   4. Store in protected dry conditions between 65 and 85 degrees.
5. SITE CONDITIONS
   1. The permanent HVAC system must be on for 7 days prior to, during and after installation between 65 and 85 degrees Fahrenheit or 18 to 29 degrees Celsius.
   2. Material and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to installation.

**PART 2 – PRODUCTS**

1. TESTING REQUIREMENTS
   1. Slip Resistance ASTM D2047: ADA Compliant
   2. Static Load Limit ASTM F970: 1500 psi
   3. Residual Indentation F1914: passes , 8%
   4. Flexibility ASTM F137: Passes
   5. Resistance to Heat ASTM F1514: Passes
   6. Resistance to Light ASTM F1515: Passes
   7. Resistance to Chemicals ASTM F925: Passes
   8. Radiant Flux ASTM E648: / 0.45 W/sq. cm., Class I
   9. Smoke Density ASTM E662: Passes, <450
2. RESILIENT TILE
   1. Manufacturer: Patcraft
   2. Product: highland forest, I200V
   3. Construction:
   4. Class ASTM F1700: ASTM F1700 Class III printed film vinyl plank
      Type B (embossed)
   5. Wear-layer Thickness: 20 mil
   6. Overall Thickness: 0.098 inches (2.5 mm)
   7. Nominal Dimensions: 4 in x 36 in
   8. Finish: ExoGuard®
   9. Backing Class:
   10. Installation: Glue Down
3. INSTALLATION MATERIALS
   1. High Moisture Management Solutions (10 Year Warranty)
      1. **Concrete with %RH <99%, MVER </=10, pH < 11**
         1. Apply USG Advanced skim coat as necessary for patch/skim coat.
         2. Install flooring with Shaw 4151\* adhesive.
      2. **Concrete with %RH >/= 99%, MVER </=12, pH </= 12**
         1. Apply Shaw Surface Prep EXT followed by Shaw Moisture Shield.
         2. Apply USG Advanced skim coat as necessary for patch/skim coat.
         3. Install flooring with Shaw 4151\* adhesive.
      3. **Concrete with %RH >/= 99%, MVER </= 17, pH> 12**
         1. Apply Surface Prep
         2. Apply Shaw Moisture Shield.
         3. Apply MRP
         4. Apply USG Advanced Skim Coat as necessary for patch/skim coat.
         5. Install flooring with Shaw 4151\* adhesive
      4. **Concrete with %RH >/= 99%, MVER >17, pH> 12**
         1. Apply Shaw Surface Prep EXT followed by Shaw MoistureTek.
         2. Apply USG Advanced skim coat as necessary for patch/skim coat.
         3. Install flooring with Shaw 4151\* adhesive.
   2. Adhesives:
      1. Lokworx Resilient 95% RH 8 lbs pH 10
      2. Lokworx+ Resilient
      3. S150 spray 95% RH NA pH 11
      4. Shaw 4151 for high moisture 99% RH 10 lbs. pH 12
      5. Shaw 200 for low demand areas 85% RH 5 lbs pH 5-9
   3. Weld Rod
      1. Heat
      2. Chemical
   4. Primer: Shaw 9050
   5. Leveling and Patching Compounds: Use only Portland-based patching and leveling compounds. Do not install resilient flooring over gypsum-based patching and/or leveling compounds.
   6. Shaw MRP: Barrier Primer over concrete, Old Cut Back Adhesive, Chemically Abated Floors or other solid surfaces
   7. FinishWorx Transition Strips (Micro Transition, Metal TrimMaster)
   8. FinishWorx Wall Base Accessories
   9. FinishWorx Cove Base Accessories:
      1. Angle Profile 
      2. Detail Profile
      3. Quarter Round Profile
   10. Floor Polish

**PART 3 – EXECUTION**

1. EXAMINATION
   1. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content, pH, smoothness and level.
   2. Proceed with installation after any unsatisfactory conditions have been corrected.
2. PREPARATION OF SUBSTRATE
   1. 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, or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew and other foreign materials that might prevent adhesive bond.
   2. RADIANT HEAT
      1. Substrates must not exceed 85°F surface temperature.
      2. Seven days prior to installing resilient products, activate the radiant system at maximum temperature to reduce residual moisture in the concrete.
      3. 24 hours prior to installation, lower the temperature to 70°F and maintain that temperature for 48 hours after installation.
      4. Ensure the floor does not exceed 85°F. An in-floor temperature sensor is recommended.
   3. WOOD SUBSTRATES
      1. Double-layered APA rated plywood subfloors should be a minimum 1” total thickness, with at least 18” well ventilated air space beneath. Insulate and protect crawl spaces with a vapor barrier.
      2. Do not install over sleeper construction subfloors or wood subfloors applied directly over concrete.
      3. Underlayment panels can only correct minor deficiencies in the sub-floor while providing a smooth, sound surface on which to adhere the resilient flooring.
      4. Any failures in the performance of the underlayment panel rests with the panel manufacturer and not with Shaw Industries, Inc.
      5. 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.
      6. Always follow the underlayment manufacturer’s installation instructions.
   4. STRIP – PLANK WOOD FLOORING
      1. Due to expansion and contraction of individual boards during seasonal changes add 1/4” or thicker APA rated underlayment panels be installed over these types of subfloors.
   5. CONCRETE
      1. New or existing concrete subfloors must meet the guidelines of the latest edition of ACI 302 and ASTM F 710.
      2. On or below-grade slabs must have an effective vapor retarder directly under the slab.
      3. Wet curing 7 days is the preferred method for curing new concrete.
      4. Remove curing compounds 28 days after placement, so concrete can begin drying.
      5. Concrete floors shall be flat within 3/16” in 10 ft. F-Number System: Overall values of FF 36/FL 20 may be appropriate for resilient floor coverings.
      6. Internal relative humidity may not exceed 90% RH.
   6. LIGHTWEIGHT CONCRETE
      1. All recommendations and guarantees as to the suitability and performance of lightweight concrete under resilient flooring are the responsibility of the lightweight concrete manufacturer. The installer of the lightweight product may be required to be authorized or certified by the manufacturer. Correct on-site mixing ratios and properly functioning pumping equipment are critical. To ensure proper mixture, slump testing is recommended.
      2. Lightweight aggregate concretes having densities greater than 90 lbs. per cubic foot may be acceptable under resilient flooring.
      3. Concrete slabs with heavy static and/or dynamic loads should be designed with higher strengths and densities to accommodate such loads.
      4. Surface must be permanently dry, clean, smooth, and free of all dust and structurally sound.
3. INSTALLATION
   1. LAYOUT AND INSTALLATION
   2. Install using conventional tile and plank installation techniques. Plank products should have a minimum of 6 to 8” seam stagger.
   3. Center rooms and hallways so borders are not less than half of a tile or plank.
   4. Work out of multiple boxes at the same time.
   5. In hallways and small spaces, work lengthwise from one end.
   6. Ensure cut edges are always against the wall.
   7. To cut products, score the top side of the material with a utility knife. Bend the product and finish the cut through the back side. It may be necessary to use a heat gun to cut around vertical obstructions. Allow the heated product to return to room temperature before installation.
   8. If you cut the product into a fine point, it may delaminate. Use an ethyl cyanoacrylate-based super glue to fuse the points together. Clean all glue from the top surface immediately. Alcohol-based super glues may cause the vinyl to swell.
   9. Roll the plank or tile with a 3-section 100 lb. roller. Re-roll the floor within the working time of the adhesive. Continue to roll the floor throughout the working day to ensure a proper bond.
   10. Use floor protection after installation. DO NOT use a plastic adhesive-based protection system.
4. MAINTENANCE
   1. Initial Maintenance
      1. Sweep, vacuum or dust mop to remove dirt and grit.
      2. If needed, add neutral cleaner to cool water following the manufacturer’s instructions.
      3. Scrub with a low-rpm machine or auto scrubber. Use a red pad or brush.
      4. Never use brown or black pads (too aggressive and can damage the product)
      5. Remove the cleaning solution with a wet-dry vacuum or auto scrubber until the floor is dry.
      6. Rinse the floor with clean water. Repeat the rinse process if necessary to remove all haze.
   2. Routine Maintenance
      1. Sweep, vacuum or dust mop to remove dirt and grit.
      2. Add neutral pH cleaner to cool water following the manufacturer’s instructions.
      3. As needed, scrub with a low-rpm machine or auto scrubber to retain appearance. Use a red (light scrubbing) pad and neutral cleaner following the manufacturer’s instructions.
   3. Preventative Floor Care
      1. Use walk-off mats that are as wide as the doorway and long enough for soil load and weather conditions.
      2. Use mats with a non-staining backing.
      3. Floor protectors should be used on all furniture legs.
      4. The surface area of the floor protectors should be no less than 1” in diameter.
   4. Full maintenance instructions will be provided by the manufacturer.

END OF SECTION 096519

Updated 6/28/18 by Jean Russell