SECTION 096813 – TILE CARPETING

**PART 1 – GENERAL**

1. RELATED DOCUMENTS
   1. Division 01 Specification Sections
2. SUMMARY
   1. This section relates to carpet tile.
3. PREINSTALLATION MEETINGS
   1. Conducted at (insert time, location and key contact).
4. SUBMITTALS
   1. Product Specification
   2. Specification for Adhesive
   3. Shop Drawings
   4. Samples
   5. Schedule
   6. Qualifications for Installer
5. CLOSEOUT SUBMITTALS
   1. Maintenance Instructions
   2. Warranty Documents
6. QUALITY ASSURANCE
   1. Environmental:
      1. Green Label Plus Certified
      2. Cradle to Cradle Certified Gold
      3. NSF 140 Gold
      4. Health Product Declaration
      5. Declare Label, red list compliant
      6. No PVC components
   2. Installer Qualifications: Installer who has been trained in the installation of carpet tile.
   3. Manufacturer Qualifications
      1. ISO 1400l
      2. ISO 9001
      3. Reclamation Program: Will recycle EcoWorx carpet tile free of charge for quantities of 500 SY (418 SM) or more within continental United States and Canada or 5000 SY (4180 SM) globally.
   4. Mockups at designated location for architect review and approval.
7. MATERIAL STORAGE AND HANDLING
   1. Store rolls on a flat surface, away from vents and direct sunlight.
   2. Store in protected dry conditions between 65 and 85 degrees.
8. SITE CONDITIONS

The following conditions must be maintained for 24 hours prior to, during and permanently after installation:

* 1. HVAC System must be operational.
  2. The installation site, carpet and adhesive must be between 50°F and 95°F.
  3. The installation site’s ambient relative humidity must not fall below 40%.
  4. Conduct relative humidity or Anhydrous Calcium Chloride testing. Results must be within the proper range for Shaw 5000 adhesive:
     1. Calcium Chloride ASTM F-1869 5.0 lbs per 1000 SF /24 hours
     2. Relative Humidity ASTM F-2170 85%
     3. EcoLogix ES does not require moisture or pH testing.
  5. Conduct pH testing on the floor in several locations. A reading below 5.0 or above 9.0 requires corrective measures.

**PART 2 – PRODUCTS**

1. TESTING REQUIREMENTS
   1. Pill Test CPSC FF 1 70: Pass
   2. Radiant Panel ASTM E648: Class I
   3. NBS smoke ASTM E662 NF: <450
   4. Static AATCC 134: <3.5 kv
   5. Coefficient of Friction: 0.6 (Meets ADA requirements)
2. TILE CARPETING
   1. Manufacturer: Patcraft
   2. Product: structure arc, I0599
   3. Construction: Multi-Level Pattern Loop
   4. Fiber: ecosolution q100™ nylon
   5. Dye Method: 100% solution dyed
   6. Backing: ecoworx® tile
   7. Protective Treatment:
   8. Size: 18 in x 36 in
   9. Gauge: 1/12 inches
   10. Stitches: 10 per inches
   11. Finished Pile Thickness: Finished0.122 inches
   12. Average Density: 6492 oz/yd³
   13. Total Thickness: 0.26 inches
   14. Tufted Weight: 0
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. For EcoWorx (fiberglass reinforced):
         1. Lokworx+ Carpet Tile Adhesive 15 lbs. 97% RH pH 5-11
         2. Lokworx Carpet Tile Adhesive 10 Ibs. 95% RH pH 5-11
         3. Shaw 3800 indoor/outdoor: 8 lbs. 90% RH pH 5-9
         4. Shaw 4151 high moisture: 10 lbs. 99% RH pH 12
         5. LokDots dry adhesive: No visible moisture pH 12
         6. LokWorx tabs: 10 lbs. 85 RH pH 12
         7. Mill-applied ES: No visible moisture
      2. For EcoLogix (attached cushion): All, excluding LokDots and LokWorx.
      3. For StrataWorx (light weight tile alternative to broadloom)
         1. Lokworx+ Carpet Tile Adhesive 15 lbs. 97% RH pH 5-11
         2. Lokworx Carpet Tile Adhesive 10 Ibs. 95% RH pH 5-11
         3. Shaw 3800 indoor/outdoor: 8 lbs. 90% RH pH 5-9
         4. Shaw 4151 high moisture: 10 lbs. 99% RH pH 12
         5. LokDots dry adhesive: No visible moisture pH 12
         6. LokWorx tabs: 10 lbs. 85 RH pH 12
   3. Primer (if needed): 9050 is an acrylic solution made to neutralize excess alkali that is also recommend as a primer coat to prevent over absorption of adhesive and to ensure a better bond. Formulated with an antimicrobial agent, it provides protection against bacteria, fungi, and mildew in the wet or dry state. Contains no solvent, alcohol, or other hazardous materials per OSHA 29 CFR 1910.1200. Non-photo chemically reactive per rule #102. Available in 4-gallon pails.
   4. Leveling and Patching Compounds: Use a cementitious patching/leveling compound that meets or exceeds the required moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
   5. FinishWorx Transition Strips (Micro Transition, Metal TrimMaster)
   6. FinishWorx Wall Base Accessories
   7. FinishWorx Cove Base Accessories:
      1. Angle Profile
      2. Detail Profile
      3. Quarter Round Profile

**PART 3 – EXECUTION**

1. EXAMINATION
   1. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content, pH, smoothness and level.
   2. If dusting or powdering exists, seal the floor with a latex primer such as Shaw 9050.
2. PREPARATION
   1. 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.
   2. Pre-existing Adhesive
      1. Remove existing adhesives to prevent adhesive incompatability /reactions and bonding issues.
      2. Cutback Adhesive: Wet scrape the adhesive, reduce to a well bonded residue and encapsulate with a product such as Shaw MRP.
      3. Do not use adhesive removers, they will adversely affect the new adhesive and product installed.
   3. Fill depressions or cracks with a cementitious patching/leveling compound that meets or exceeds the required moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
   4. Flooring considerations:
      1. Installing over VCT and VAT: Tiles must be secure to the subfloor. Strip any wax from the surface.
      2. Installing over wood subfloors: Prime with a liquid latex such as Shaw 9050.
      3. Installing over raised access flooring: Must be smooth, level, secure and clean. Install carpet tile at an offset from panel seams. Gaps must not exceed 1/16” (1.6 mm).
3. LAYOUT AND INSTALLATION
   1. Start the tile installation as near to the center of the room as possible and position it to use the largest perimeter cut tile size.
   2. Snap a chalk line parallel to one major wall bisecting the starting point. It may be necessary to offset the center chalk line to assure perimeter tiles will be at least half size.
   3. Snap a second chalk line from the starting point at 90° to the first line. Use a 3-4-5, 6-8-10, or larger triangle depending on the room size. Meters or feet may be used to lay out the triangle in these proportions.
   4. Use a full spread of adhesive applied with a 3/8” foam paint roller or 1/16 x 1/32 x 5/64 u-notch trowel. The adhesive must be allowed to dry completely before installing the carpet. Installing into wet adhesive will result into a permanent bond and may cause the carpet to bubble. Trowel application of adhesive is recommended for EcoLogix. EcoWorx ES / EcoLogix ES no adhesive required. Approximate coverage rates are 35-40 yards per gallon when applied with a roller, and 28 -33\* yards per gallon when applied with a trowel.
   5. Install each full carton and complete an entire pallet before starting another pallet to minimize product variation. Each tile has directional arrows on the back. These arrows allow for one-directional or multi-directional installation. Some styles may be large scale or linear in design and require quarter turning. If you are unsure about whether or not your product requires a quarter turned installation, please contact 1.877.502.7429. Numbers within the arrows are for manufacturing purposes and are not related to installation.
   6. Begin installation at the intersection of two chalk lines. Continue until you complete one quadrant. Proceed to an adjoining quadrant until all four quadrants are completed. Larger areas may require chalk lines bisecting the original four quadrants.
   7. Install tiles using the pyramid technique. This gives you multiple alignment checks. If the edges do not align and the misalignment increases with progression of the installation, find and correct the source of the problem.
   8. Carpet tiles come in various sizes. All Shaw tiles have directional arrows on the back of the tile. Slide tiles into position to prevent yarn from being trapped between the tiles. Trapped yarn will adversely affect the appearance of the installation and will cause alignment problems.
   9. EcoWorx ES /EcoLogix ES are manufactured with the adhesive already applied. Once the tile is ready to install, simply peel the liner from the back and position snugly to the adjacent tile.
   10. Tiles must fit snugly, but not be compressed. Press the entire surface of the tile to ensure adhesion. Check for fit by measuring the length of ten full tiles after installation. The measurement must not be less than, or exceed by more than 1/4 inch, the length of the tiles being multiplied by ten. For example: if 24" X 24" tiles are being installed, the measurement should be between 240 and 240 1/4 inches.
   11. Measure and cut tiles from the back using a straight edge. Be sure the arrows are pointing in the correct direction.
   12. Roll the entire installation with a 75 lb. or greater roller to assure the proper adhesion to the substrate.
4. MAINTENANCE
   1. Post-installation Care
      1. Place plywood over the carpet when heavy objects will be moved within 24 hours after installation.
   2. Preventative Floor Care
      1. Use protective chair mats under chairs with casters.
      2. Use soil removal mats at exterior entrances.
      3. Use absorbent mats in areas where moisture, oil and grease are present.
   3. Routine Maintenance
      1. Set a schedule depending on traffic and vacuum regularly.
      2. Remove spots with spot removers as soon as they occur.
      3. Use encapsulation agents periodically.
      4. Clean with hot water extraction periodically.

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| Traffic Level | Vacuum | Spot Removal | Interim Cleaning | Hot Water Extraction |
| Light | 2/week | As needed | As needed | 1/year |
| Moderate | 1/day | As needed | As needed | 2/year |
| Heavy | 1/day | As needed | Monthly | 4/year |
| Extra Heavy | 1/day | As needed | Weekly | Monthly |

END OF SECTION 096813

Updated 6/28/18 by Jean Russell