

## SECTION 09650 – RESILIENT FLOORING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Free-lay resilient interlocking tile.
- B. Related Sections include the following:
  - 1. Reference Division 9 for Flooring.
  - 2. Reference Division 9 for wall base and accessories installed with specialty resilient flooring.
  - 3. Reference Division 9 for resilient tile or sheet flooring installed in areas other than specialty resilient activity spaces.

#### 1.3 SUBMITTALS

- A. Product Data: Provide product data for each type of product indicated.
- B. Shop Drawings: Provide shop drawings indicating installation details including border tiles, floor patterns made by varying colors of tiles, layout, colors, widths, and dimensions of game lines, and locations of athletic equipment floor inserts.
- C. Samples: Submit samples for each type, color, and pattern of flooring indicated, 6-inch- (150-mm-) square samples of same thickness and material indicated for the Work.
- D. Maintenance Data: Submit maintenance data for each type of flooring indicated to include in maintenance manuals specified in Division 1.
- E. Tile Test reports: Indicated and interpret test results for compliance of special-purpose tile with specified requirements.

#### 1.4 REFERENCES (Industry Standards):

- A. ASTM International (ASTM):
  - 1. ASTM D2047 Standard Test Method for Static Coefficient of Friction Of Polish-Coated Flooring Surfaces as Measured by the James Machine
  - 2. ASTM D2240 Standard Test Method for Rubber Property – Durometer Hardness
  - 3. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source

4. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
5. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
6. ASTM F510 Standard Test Method for Resistance to Abrasion of Resilient Floor Coverings Using an Abrader with a Grit Feed Method
7. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
8. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring
9. ASTM F970 Standard Test Method for Static Load Limit
10. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
11. ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings

B. National Fire Protection Association (NFPA):

1. NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a  
Radiant Energy Source
2. NFPA 258 Test Method for Specific Density of Smoke Generated by Solid Materials

## 1.5 QUALITY ASSURANCE

- A. Product Characteristics: Flooring tiles shall be made from a minimum of 70 percent recycled materials.
- B. Source Limitations: Obtain each type, color, and pattern of product specified from one source with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.
- C. Fire- Test-Response Characteristics: Provide products with a Class I critical radiant flux classification , as determined by testing identical products per ASTM E 648 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- D. Mockups: Before installing tiles, install mockups to demonstrate aesthetic effects and qualities of materials and execution. Install mockups to comply with the following requirements, using materials indicated for the completed Work:
  1. Install mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
  2. Notify Architect seven days in advance of dates and times when mockups will be installed.
  3. Demonstrate the proposed range of aesthetic effects and workmanship.
  4. Obtain Architect's approval of mockups before starting work.
  5. Approved mockups may become part of the completed Work if undamaged at time of Substantial Completion.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storing.

- B. Store materials to prevent deterioration. Store tiles on flat surfaces.
- C. Move products into spaces where they will be installed at least 48 hours before installation, unless a longer conditioning period is recommended in writing by the tile manufacturer. Do not install products until they are at the same temperature as the space where they are to be installed.

#### 1.7 PROJECT CONDITIONS

- A. Install products after other finishing operations, including painting, are completed.
- B. Provide as follows:
  - 1. Maintain a temperature of not less than 70 degree F (21degree C) or more than 95 degree F (35 degree C) in installation spaces for at least 48 hours before installation, during installation, and for at least 48 hours after installation, unless manufacturer's written recommendations specify longer time periods. After post-installation period, maintain a temperature of not less than 55 degree F (13 degreeC) or more than 95 degree F (35 degree C).

#### 1.8 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Furnish not less than 1 box for each 50 boxes or fraction thereof, of each type, color, pattern, and size of tile flooring installed.
  - 2. Deliver extra materials to Owner.

### PART 2 - PRODUCTS

#### 2.1 SPECIALTY RESILIENT FLOOR TILE

- A. Product: Subject to compliance with requirements, provide the following:
  - 1. "EcoLock™" as manufactured by SelecTech, Inc. (877-738-4537), [www.selectech.com](http://www.selectech.com).
- B. Material: Finished Surface: Heterogeneous bio-polyurethane, glass fiber reinforcement, paper print layer and PU top coat. Interlocking Base: polyolefin/calcium carbonate composite.
- C. Style: Interlocking Tile
- A. Installation Method: Free lay.
- D. Size: 18.5 inches (470 mm) square (nominal).
- E. Thickness: 0.34 inch (8.6 mm).
- B. Weight: Not less than 5.1 pounds (2.3 kg) per tile.
- C. Color and Pattern as selected by the Architect.

- D. Materials Content: Vinyl-Free; Red-List Free
- E. Abrasion Resistance (ASTM F510): Less than 0.4 grams (0.9%) at 1000 cycles using a 500 gram H-18 wheel.
- F. Flammability (ASTM E648/NFPA 253):  $\geq 0.45$  watts/sq. cm; Meets Class 1
- G. Smoke Density (ASTM E662/NFPA 258): <450
- H. Slip Resistance (ASTM D2047); Dry 0.92/ Wet 0.93)
- I. VOC's: CA 01350 Compliant
- J. Hardness (ASTM D2240): Shore Type A >0.90
- K. Static Load (ASTM F970:  $\leq 0.005$  inches is required under 175 lbs
- L. Substrate Preparation: Per ASTM F710 and EcoLock by SelecTech, Inc. installation instructions.

## 2.2 ACCESSORIES

- A. Trowelable Leveling and Patching Compound: Latex-modified, hydraulic-cement-based formulation approved by flooring manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where installation of products will occur, with Installer present, for compliance with manufacturer's requirements. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements.
- B. Concrete Substrates: Verify that concrete slabs comply with ASTM F 710 and the following:
  - 1. Substrates are free of cracks, ridges, depressions, scale, and foreign deposits
- C. Wood Subfloor Substrates: Verify the following:
  - 1. Underlayment over subfloor complies with requirements specified in Division 6 Section "Rough Carpentry."
  - 2. Underlayment surface is free of irregularities that may show through surface.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions that are larger than  $\frac{1}{4}$ " wide. Feather any ledges in substrates to provide a smooth transition. The floor does not have to be level so long as there are no cracks or ledges with more than a  $\frac{1}{8}$ " drop.

- B. Scrape existing adhesives off the existing floor substrate so that no large (greater than 1/8" thick) globs of adhesive remain. It is not necessary to completely remove the adhesive to bare concrete
- C. Existing hard-surface flooring products can be left in place so long as cracks, holes, and depressions and ledges are corrected as described in 3.2.A.
- D. Broom and vacuum clean substrates to be covered immediately before product installation.

### 3.3 FLOORING INSTALLATION, GENERAL

- A. Mix tiles from several boxes to avoid adverse color variations in the final installation. Open several boxes at one time to ensure that color variations do not occur in one area.
- B. Scribe, cut, and fit flooring to butt neatly and tightly to vertical surfaces, equipment anchors, floor outlets, and other interruptions of floor surface.
- C. Extend floor coverings into toe spaces, door reveals, closets, and similar openings, unless otherwise indicated.
- D. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating subfloor markings on finish flooring. Use nonpermanent, non-staining marking device.
- E. Whether indicated or not, provide a minimum of a 3/8 inch gap around the perimeter of the flooring tiles to allow for expansion and contraction.

### 3.4 TILE INSTALLATION

- A. Lay out tiles from center marks established with principal walls.
  - 1. Ignoring minor wall offsets, lay out so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths narrower than one-third of a tile at perimeter.
  - 2. Lay tiles as follows room axis, unless otherwise indicated.
    - Square with the room axis.
    - At a 45 degree angle.
    - At indicated.
- B. Match tiles for color and pattern by selecting them from cartons of the same batch and mixing tiles as recommended in writing by manufacturer.
  - 1. Lay tiles in the following pattern:  
  
Pattern of colors and sizes indicated on Drawings.

### 3.5 CLEANING AND PROTECTING

- A. Perform the following operations immediately after installing flooring products:
  - 1. Sweep and vacuum floor thoroughly.

2. Damp mop floor to remove marks and soil using method and cleaner recommended in writing by flooring manufacturer.
  3. If desired for additional protection, seal floor with an acrylic floor finish using method and sealer recommended in writing by flooring manufacturer.
- B. Protect flooring against mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods indicated or recommended in writing by flooring manufacturer.
1. Do not move heavy or sharp objects directly over floor surfaces. Place plywood or hardboard panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

END OF SECTION 09650