



DIVISION 9: FINISHES

SECTION 096533 – Conductive Resilient Flooring

FreeStyle ESD Free lay Flooring – FreeStyle ESD Plus

1. GENERAL

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.

2. SUMMARY

- A. This Section includes the following:
 - 1. Free-lay conductive vinyl 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.

3. PERFORMANCE REQUIREMENTS

- A. Static Coefficient of Friction: Provide products with the following values as determined by testing identical products per ASTM C 2047 for level surfaces.:
 - 1. Minimum of 0.65.
- B. Americans with Disabilities Act (ADA): Whether indicated or not, the products specified herein must comply with Americans with Disabilities Act Guidelines (ADAG).
- C. Recycled Content: Minimum 20%
- D. Performance Characteristics: Provide tiles that meet the following:
 - 1. Abrasion Resistance: Less than 0.4 grams (0.9%) at 1000 cycles using a 500-gram H-18 wheel (ASTM D-3389)



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2. Shore A Hardness of 83 (+/- 5) per ASTM D-2240.
3. Meets Standard Specification for Solid Vinyl Tile ASTM F-1700, 1996 (except as to size, thickness and squareness, which standards are specific to a 12" x 12" VCT Tile)
4. Critical Radiant Flux Classification (ASTM E648): Meets Standard for Class I Fire Rating
5. Solvent/Stain Resistance: Comply with ASTM F-925-96.
6. Meets California Protocol 1350 for VOC emissions.

E. Electrical Performance: Compliance with ANSI/ESD §20.20 qualification testing.

1. ANSI/ESD STM7.1:
 - a. For Conductive Tile, PASSES qualification testing by a certified third-party testing laboratory, testing in the conductive range at $<1.0 \times 10^6$ Ohms.
 - b. For Dissipative tile testing must be in the range of 1.0×10^6 to 1.0×10^9 Ohms
2. ANSI/ESD STM97.1: PASSES qualification testing by a certified third-party testing laboratory. The resistance of the floor measurement in combination with a person (ANSI/ESD STM97.1) and footwear measures $<1.0 \times 10^9$ Ohms.
3. ANSI/ESD STM97.2: PASSES qualification testing by a certified third-party testing laboratory. The voltage when measured in combination with a person, and footwear per ANSI/ESD STM97.2 is <100 volts.

4. 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 interpreted test results for compliance of specialpurpose tile with specified requirements.



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5. QUALITY ASSURANCE

- A. Product Characteristics: Flooring tiles shall be made from a minimum of 20 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- TestResponse 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.

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.

7. PROJECT CONDITIONS

- A. Install products after other finishing operations, including painting, are completed.



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B. Provide as follows:

1. Maintain a temperature of not less than 68-degree F (20degree C) or more than 80-degree F (26 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 60-degree F (16 degree C) or more than 85-degree F (29 degree C).

8. WARRANTY

A. Manufacturer warrants that flooring products are free from manufacturing defects and will meet applicable ANSI/ESD electrical standards when properly installed. Refer to product-specific warranty document for additional details and warranty period.

1. Material warranty must be direct from the product manufacturer.
2. Failures include the following:
 - a. Material manufacturing defects.
3. Warranty Period:
 - a. For materials: 10 years from date of Substantial Completion.

2.PRODUCTS

1. SPECIALTY RESILIENT FLOOR TILE

A. Product: Subject to compliance with requirements, provide the following:

1. “FreeStyle™ ESD Plus”,” as manufactured by SelecTech, Inc. (877-738-4537).

B. Material: Virgin and recycled vinyl.

C. Style: Solid surface.

D. Installation Method: Free lay.

E. Size: 18.5 inches (470 mm) square (nominal).

F. Thickness: 0.34 inch (8.63 mm).



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- G. Weight: Not less than 5.3 pounds (2.4 kg) per tile.
- H. Color and Pattern as selected by the Architect.
 - 1. Apollo
 - 2. Asteroid
 - 3. Blizzard
 - 4. Oasis

2. ACCESSORIES

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

3. EXECUTION

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. Slab substrates are dry and cured.
 - 2. 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, or stain floor covering.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

2. PREPARATION

- A. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.



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- B. Broom and vacuum clean substrates to be covered immediately before product installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3. FLOORING INSTALLATION, GENERAL

- A. Scribe, cut, and fit flooring to butt neatly and tightly to vertical surfaces, equipment anchors, floor outlets, and other interruptions of floor surface.
- B. Extend floor coverings into toe spaces, door reveals, closets, and similar openings, unless otherwise indicated.
- C. 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.
- D. 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.

4. TILE INSTALLATION

- A. Lay out tiles from corner 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 using manufacturers installation guidelines.
 - Square with the room axis.
- 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.
- C. Ground Floor every 1,000 sq. ft. for concrete or wood subfloor, every 3,000 sq. ft. for access floor, using manufacturers grounding kit and instructions.

5. CLEANING AND PROTECTING

- A. Perform the following operations immediately after installing flooring products:



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1. Sweep and vacuum floor thoroughly.
 2. Do not wash floor until after waiting period recommended in writing by flooring manufacturer.
 3. Clean floor to remove marks and soil using method and cleaner recommended in writing by flooring manufacturer.
 4. Seal floor with an acrylic floor finish using method and sealer recommended in writing by flooring manufacturer (optional)
- 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 hard-board panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

END OF SECTION 096533