

SECTION 09 68 13 - MODULAR TILE FLOORING

TIPS:

To view non-printing **Editor's Notes** that provide guidance for editing, click on Masterworks/Single-File Formatting/Toggle/Editor's Notes.

To read **detailed research, technical information about products and materials, and coordination checklists**, click on Masterworks/Supporting Information.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Woven vinyl floor tile with BioFelt Backing.
- B. Related Requirements:
 - 1. Section 03 54 16 "Hydraulic Cement Underlayment" for substrate preparation.
 - 2. Section 09 65 13 "Resilient Base and Accessories" for wall base and accessories installed with resilient flooring.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
 - 1. Product Data: For adhesives, indicating VOC content.
 - 2. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
 - 3. Laboratory Test Reports: For flooring products, indicating compliance with requirements for low-emitting materials.
- C. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

1. Show details of special patterns.
 - D. Samples: Full-size units of each color and pattern of floor tile required.
 - E. Samples for Initial Selection: For each type of floor tile indicated.
 - F. Samples for Verification: Full-size units of each color and pattern of floor tile required.
 - G. Product Schedule: For floor tile. [**Use same designations indicated on Drawings.**]
- 1.4 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For Installer.
- 1.5 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For each type of floor tile to include in maintenance manuals.
- 1.6 MAINTENANCE MATERIAL SUBMITTALS
- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Floor Tile: Furnish one box for every [50] <Insert number> boxes or fraction thereof, of each type, color, and pattern of floor tile installed.
- 1.7 QUALITY ASSURANCE
- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation method indicated.
 1. Engage an installer who employs workers for this Project who are member of the Floor Covering Installation Contractors Association (FCICA) and/or certified by the Certified Floorcovering Installers Association (CFI).
 2. Engage an installer with minimum of 3 years of experience in installation of flooring products similar in scope and complexity with a minimum of 5 completed projects within the project market within the last 2 years, and participates in manufacturer's environmental program including responsible flooring removal, recycling, and installation.
 - B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 1. Build mockups for floor tile including [**resilient base and**] accessories.

- a. Size: Minimum **100 sq. ft. (9.3 sq. m)** for each type, color, and pattern [**in locations indicated**] [**in locations directed by Architect**] <Insert locations>.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to the installation site in the manufacturer's original packaging and in good condition. Packaging to contain manufacturer's name and marks, identification number, shipping and handling instructions and related information.
- B. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than **68 °F** or more than **75 °F**, and measures between 10% and 65% in relative humidity (RH).
- C. Environmental Limitations: Do not deliver or install flooring until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.

1.9 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than **68 °F (20 °C)** or more than **75 °F (24 °C)**, in spaces to receive floor tile during the following time periods:
 1. 48 hours before installation.
 2. During installation.
 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than **68 °F (20 °C)** or more than **75 °F (24 °C)**.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

1.10 WARRANTY

Commercial 10-year warranty for BioFelt products:

PRODUCTS AND PERSONS COVERED: Chilewich offers this warranty for indoor applications of its Plynyl® BioFelt-backed tiles and plank tiles. The warranty is for the original end-user only and is non-transferable and non-assignable.

WARRANTY COVERAGE: The covered Plynyl® BioFelt flooring products will conform to the applicable specifications found on the company's website at www.chilewich.com/contract/technical and will be free from defects in material and workmanship for a period of ten years commencing upon the original ship date from the manufacturer.

Abrasive Wear | Under normal use, the covered Plynyl® BioFelt flooring products will maintain their appearance and texture through the warranty period. Should the product exhibit abrasive wear, claims will be evaluated by determining whether the product meets minimum product specifications when tested using standard manufacturing methodology. The covered Plynyl® BioFelt flooring products will not be considered defective unless: (a) more than 10% of the face fiber is missing as measured by weight loss when compared to product specifications; (b) an area exhibits broken yarns or frayed fibers which result in a change of appearance which is not recoverable by maintenance or local repair to the flooring surface; or (c) the abrasion raises a safety concern caused by a change in the flooring's surface.

Colorfastness | The covered Plynyl® BioFelt flooring products will not exhibit significant changes in color as a result of exposures to light or atmospheric conditions including ozone and oxides of nitrogen. A significant color change is defined as a color difference greater than a 3.0 gsu per AATCC 16E when compared to non-exposed materials.

Static Protection | Under normal use, the covered Plynyl® BioFelt flooring products will not generate static build up greater than 3.5 kv during the warranty period as tested by AATCC 134.

WARRANTY EXCLUSIONS: The warranties regarding abrasive wear and colorfastness do not cover abnormal wear or appearance change caused in whole or in part by abusive treatment, excessive rolling traffic, unprotected chair castor traffic, repetitive mechanical traffic, chemical exposures or foreign contaminants which can accelerate or intensify surface wear and color change. The colorfastness warranty does not cover changes in color resulting from contact with materials like rubber compounds which have been shown to result in a change of color with contact. Installation and maintenance instructions listed at www.chilewich.com/contract/technical must be followed for any warranty to remain in effect. Chilewich's warranties do not cover product failures caused either by failure of the underlayment and/or subfloor to meet the levelness, porosity and moisture level specifications set out in Chilewich's installation instructions or by adhesive compatibility or failure.

CONTRACT REMEDIES: Contact your Chilewich dealer, Chilewich representative and/or Chilewich customer service with product performance concerns. Chilewich will supply a Warranty Claim Form to gain information related to the problem, request pictures of the flooring and request a copy of a sales receipt or other documents as a proof of purchase. Once this information is received and reviewed, Chilewich at its expense may schedule an on-site visit, if required, to assist in the resolution of the concerns. If the material is defective as

defined above, Chilewich will, at its sole option, repair or replace defective materials in the affected area as defined above. These are the end-user's sole and exclusive remedies. Chilewich will pay reasonable shipping and labor costs for removing or replacing the defective materials. Charges for moving equipment, furnishings or panels are the end-user's expense.

DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY: Chilewich disclaims warranties and limits its liability as follows and to the maximum extent permitted by applicable law: (A) EXCEPT AS SET FORTH ABOVE, CHILEWICH DISCLAIMS AND EXCLUDES ALL REPRESENTATIONS, WARRANTIES AND CONDITIONS, EITHER EXPRESS OR IMPLIED. CHILEWICH EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF; (B) IN NO EVENT SHALL CHILEWICH BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS OR BUSINESS INFORMATION, OR ANY OTHER MONETARY LOSS ARISING OUT OF THE USE OR INABILITY TO USE THE GOODS SOLD, RENTED OR LICENSED (WHETHER OR NOT CHILEWICH HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES); AND (C) CHILEWICH'S ENTIRE LIABILITY FOR ANY MATTER OR THING RELATED TO THE GOODS SOLD, RENTED OR LICENSED OR ANY CLAIM ARISING IN CONNECTION THEREWITH, SHALL BE LIMITED TO THE LESSER OF THE COST OF THE LIMITED REMEDIES PROVIDED UNDER THE RELEVANT WARRANTY OR THE TOTAL AMOUNT ACTUALLY RECEIVED BY CHILEWICH FOR THE GOODS.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Pill Test / DOC-FF-1-70 (ASTM D-2589) - Requirement: Pass
- B. Flooring Radiant Panel / ASTM E-648 - Requirement: Class I (Above .45 w/cm)
- C. Optical Smoke Density: Rating not more than 400
- D. CRI VOC Chamber Test/Indoor Air Quality test (CRI-IAQ) Green Label Plus™ Test.
- E. Lightfastness: Rating of not less than 5 on International Grey Scale after 40 SFU's when tested in accordance with AATCC Test Method 16E.
- F. Dimensional Stability; Change not greater than 0.01"
- G. Impact Insulation Classification (ASTM E 492-09): IIC Rating of 59
- H. Slip Resistance (ASTM 1028-96): Complies with ADA Guidelines for level surface
- I. Flooring products shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.2 WOVEN VINYL FLOOR TILE <Insert drawing designation>

- A. Manufacturer:
 - 1. Basis of Design: Plynl BioFelt modular tile; by Chilewich, 44 East 32nd Street, New York, NY 10016. Chilewichcontract.com
- B. Face Fabric: Woven Vinyl fabric with TerraStrand
- C. Backing: Plynl BioFelt backing system comprising recycled polyester and polyurethane
- D. Total Weight (Nominal Average): 8.5- 9.5 ounce / square foot
- E. Standard Size: 18" x 18" approx. (45.7cm x 45.7cm)
- F. Thickness: Manufacture's standard.
- G. Testing Specifications - Pill Test: Yes
- H. Testing Specifications - Flooring Radiant Panel: Class 1
- I. Testing Specifications - Smoke Density: Less than 450 flaming (ASTM E 662)
- J. Recycled content: Minimum of 50% recycled content with 7% renewable content
- K. Colors and Patterns: **[As indicated by manufacturer's designations] [Match Architect's sample] [As selected by Architect from full range of industry colors] <Insert colors and patterns>**.

2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
 - 1. Adhesive:
 - a. AAT #675 multi purpose adhesive
 - b. Mapei Ultrabond G19
 - 2. Primer:
 - a. AAT #570
 - b. Mapei Primer L
 - 3. Adhesives shall have a VOC content of 50 g/L or less.

4. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Molding Accessories: Rubber transition strips for transitions between different flooring systems in profiles indicated on the Drawings.
- D. Metal Edge/Transition Strips: Extruded aluminum with mill finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Tile installation shall not commence until painting and finishing work is complete and ceiling and overhead work is tested, approved and completed. Traffic shall be closed during the installation of the tile flooring products. Verify concrete slabs are dry per the standards for bond and moisture tests listed in the manufacturer's installation instructions
- B. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of flooring products.
 1. Floors and substrates must be clean and dry, free of dirt, oil, grease, wax, old paints, old adhesive, cut back adhesives, powdery surface conditions or any other substance which will compromise the adhesion or ability of the product to stick to the substrate onto which it is being installed. Any contaminant on the sub-floor must be cleaned or neutralized before applying adhesive to bond the flooring material to it. Failure to clean contaminants from the sub-floor can cause adhesive failure and allow the flooring material to come loose. Do not use sweeping agents. Sub-floors should be swept, vacuumed and damp mopped to remove soils that may contaminate or compromise the installation
- B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
 3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 pH or more than 9 pH.
 4. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 85 percent relative humidity level.
- C. Primer - A primer must be used over gypsum or Portland cement based floor-leveling compounds. Allow floor-leveling compounds to dry properly as recommended by their manufacturers before applying the primer.
- D. New Concrete - New concrete must be fully cured and free of moisture (see ASTM F 710). New concrete requires a curing period of approximately 90 days.
- E. Old Concrete - Old concrete must be checked for moisture. Dry, dusty, porous floors must be primed or encapsulated.
- F. Wood - Wood floors must be APA flooring grade smooth and level, or CanPly Select Grade. If the floor is uneven, an approved underlayment will be required.
- G. Terrazzo / Marble - Level all grout lines with Portland cement-based patch reinforced with polymers. Glossy surfaces must be sanded for proper adhesive bond. Waxes and similar finishes must be removed.
- H. Other Hard Surfaces (VCT/VAT) - Tiles must be well secured to the floor or removed. Broken, damaged or loose tiles must be replaced. Waxes and similar finishes must be removed from VCT before applying adhesive. Existing sheet vinyl is not a suitable substrate for modular installation and must be removed.
- I. Carpet - Remove old carpet and carpet adhesives by scraping or other mechanical means. Any remaining adhesive residues may be covered with a Portland based patching compound or encapsulated.
- J. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
1. Access Flooring: Stagger joints of carpet tiles so tile grid is offset from access flooring panel grid. Do not fill seams of access flooring panels with adhesive; keep seams free of adhesive.

- K. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- L. Do not install floor tiles until they are the same temperature as the space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move floor tile and installation materials into spaces where they will be installed.
- M. Immediately before installation, sweep and vacuum clean substrates to be covered by floor tile.

3.3 FLOOR TILE INSTALLATION

- A. General: Comply with CRI's "CRI Carpet Installation Standard," Section 18, "Modular Carpet" and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: Glue down; install every tile with full-spread, releasable, pressure-sensitive adhesive.
- C. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
 - 1. Lay tiles [**square with room axis**] [**at a 45-degree angle with room axis**] [**in pattern indicated**] <Insert requirements>.
- D. Mix the tile from different boxes so that a random pattern of tile is achieved. In addition, each tile will have a number printed on the back with the arrow note above. The installer should randomly mix the 1-4 numbers within areas, and throughout the entire installation.
- E. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- F. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- H. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.

- I. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
- J. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Maintain ambient room temperature at 65°F and relative humidity between 10% and 65% for 48 hours.
- C. Protect flooring and related adhesives shall be protected from the direct flow of heat from heating fixtures and appliances such as hot-air registers, radiators, or other. Site conditions shall include those specified in the flooring manufacturer's installation instructions and shall also include sufficient heat, light and power required for effective and efficient working condition
- D. Perform the following operations immediately after completing floor tile installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
- E. Protect installed carpet tile to comply with CRI's "Carpet Installation Standard," Section 20, "Protecting Indoor Installations."
- F. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- G. Cover floor tile until Substantial Completion.

END OF SECTION 09 65 19