

SECTION 09 65 20 - RESILIENT FABRIC FACED SHEET FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes resilient fabric faced sheet flooring.
 - 1. A resilient sheet flooring made with a woven vinyl face pattern and multi-layered construction.
- B. Refer to Division 01 Sections for requirements regarding:
 - 1. LEED credit achievement goals as summarized by the LEED Scorecard attached to Section 01 81 13 "Sustainable Design Requirements."
 - 2. Requirements for documentation of LEED credits.
 - 3. Payment application requirements as they relate to LEED documentation requirements.

1.2 SUBMITTALS

- A. Product Data: Submit product data for each type of product indicated.
- B. Sustainable Design Submittals:
 - 1. Completed "LEED Criteria Worksheet," for each material of the product, assembly, or used in the installation of Work of this section. Refer to Division 01 Section 01 81 13 "Sustainable Design Requirements."
 - 2. Product Data: For adhesives and sealants, indicating VOC content.
 - 3. Laboratory Test Reports:
 - a. For adhesives, indicating compliance with requirements for low-emitting materials.
 - b. For flooring products, indicating compliance with requirements for low-emitting materials.
 - 4. Environmental Product Declaration: For each product.
 - 5. Health Product Declaration: For each product.
- C. Samples: Submit full-size units of each color and pattern of resilient fabric faced sheet flooring required.
- D. Maintenance Data: Submit copies of instructions for care, cleaning, maintenance and repair of resilient fabric faced sheet flooring.

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1. Provide installation recommendations in writing from the manufacturer, which shall include the application of floor sealer.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Engage a installer, who has completed a minimum of three (3) projects over the last 10 years which were similar in material, design and extent to that indicated for the Project - as determined by the Architect - and which have resulted in construction with a record of successful in service performance.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver resilient fabric faced sheet flooring in original protective wrapping with register numbers and tags attached.
- B. Deliver other materials in manufacturers unopened containers identified with name, brand, type, grade, class, and other qualifying information.
- C. Store materials in a dry location, in such a manner as to prevent damage.

1.5 PROJECT CONDITIONS

- A. Temperature: Maintain minimum temperature as recommended by Manufacturer, but not less than 64 deg F in spaces to receive resilient fabric faced sheet flooring for at least 24 hours prior to installation, during installation and for not less than 24 hours after installation.
 1. Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive resilient fabric faced sheet flooring during the following time periods:
 - a. 48 hours before installation.
 - b. During installation.
 - c. 48 hours after installation.
 2. Subsequently, maintain minimum temperature of 64 deg F in areas where work is completed.

- B. **Moisture:** Prior to resilient fabric faced sheet flooring installation, take moisture tests on all concrete floors regardless of age or grade level. The test shall be a calcium chloride test. Conduct one test for every 1,000 or less square feet of resilient fabric faced sheet flooring. Conduct tests around the perimeter of the room, at columns and where moisture may be evident. The moisture emission from the concrete shall not exceed 5.0 pounds per 1,000 square feet per 24 hours. Submit a diagram of the area showing the location and results of each test to the Architect, Owner, Contractor. If the test results exceed the limitations do not proceed with the installation until the problem has been corrected.
- C. After post-installation period, maintain temperatures within range recommended by manufacturer, but not less than 64 deg F or more than 95 deg F.
- D. Close spaces to traffic during floor covering installation.
- E. Close spaces to traffic for 48 hours after floor covering installation.
- F. Install resilient fabric faced sheet flooring after other finishing operations, including painting, have been completed.

1.6 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. **Sheet Goods:** Furnish 1 roll for every 50 rolls or fraction thereof, of each type, color, and pattern of resilient fabric faced sheet flooring installed.

PART 2 - PRODUCTS

2.1 GENERAL

- A. **Environmental Product Declaration of Product:** Products shall have Product-specific Type III EPD.

2.2 RESILIENT FABRIC FACED FLOOR TILE

- A. **Product and Manufacturer:** Refer to the drawings and the Finish Schedule for resilient fabric faced sheet flooring products for 100 percent glue down installation and indicated to be manufactured by Bolon.
 - 1. Nominal thickness not less than 2.8 mm unless greater thickness is scheduled.

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- B. 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."

2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, cementitious formulation provided or approved by resilient fabric faced sheet flooring manufacturer for applications indicated.
 - 1. Provide trowelable leveling and patching compounds for full extent of resilient fabric faced sheet flooring.
- B. Floor Tile Padding: Product recommended by manufacturer to suit resilient fabric faced sheet flooring and substrate conditions indicated.
- C. Adhesives: Water-resistant, non-staining, type recommended by manufacturer to suit resilient fabric faced sheet flooring and substrate conditions indicated.
 - 1. VOC Limits: Provide adhesives with VOC content not more than 50 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24)(ASTM D 3960).
 - 2. For field applications that are inside the weatherproofing membrane: Adhesives and sealants must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.2-2017, using the applicable exposure scenario. The default scenario is the private office scenario.
- D. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of tiles, and in maximum available lengths to minimize running joints.
 - 1. As manufactured by Schluter and selected from its full range of profiles and finishes.
- E. Sealer: Sheet flooring manufacturer's sealer product for use after installation of tile but before occupancy.
 - 1. Product Reference: Bolon Project Sealer (BPS).
 - 2. VOC Limits: Provide floor sealer with VOC content not more than 200 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24)(ASTM D 3960).

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PART 3 - EXECUTION

3.1 PRE-INSTALLATION MEETING

- A. Prior to the installation, and at the Contractor's direction, meet at the project site to review the material selections, substrate preparations, installation procedures, coordination with other trades, special details and conditions, standard of workmanship, and other pertinent topics related to the Work. The meeting shall include the Owner, Architect, the Contractor, the installer, material manufacturer's representatives, and representatives of other trades or subcontractors affected by the installation.
1. Wheels on office chairs shall be polyamide (hard type, designed for textile flooring).
 2. All furniture shall have feet of teflon, polyethylene, stainless steel or as acceptable to the flooring manufacturer that will not cause discoloration in the form of migration.

3.2 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance.
1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, holes, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
 2. Verify that finishes of substrates are free of asphalt, oil spillage, impregnating agents, and felt pen markings all of which will cause discoloration of the flooring tile.
 3. Verify that underfloor heating, if any, does not provide a temperature of higher than 30 degrees C.
 4. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by flooring manufacturer.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
1. Commencement of resilient fabric faced sheet flooring installation indicates acceptance of substrate conditions by Installer.

3.3 PREPARATION

- A. Prepare concrete substrates according to manufacturer's written recommendations to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare concrete substrates as follows:

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1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 2. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
 3. Follow the ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. This Standard includes requirements for moisture, pH testing, flatness, smoothness.
 - a. Moisture Testing:
 - 1) Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 5 lb of water/1,000 sq. ft.in 24 hours.
 - 2) Perform relative humidity tests per ASTM F2170.
 4. Specific test result requirements for the specified tile and the MATS Inc. EQ-Bond adhesive are:
 - a. ASTM F 1869: Maximum MVER of 5 lbs./1,000 sq. ft./24 hrs.
 - b. ASTM F 2170: Relative internal humidity of 75 percent or less.
 - c. PH Test: pH between 7.0 and 10.0
 5. Perform any other tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
 6. Contractor shall keep a record of all tests on file and available to all who request them.
 7. Refer to Section 09 61 43 "Vapor-Control Flooring Treatment" for slab vapor transmission control when moisture testing results exceeds flooring manufacturer's recommendations. Treat slab prior to underlayment and flooring assembly installation.
- C. Remove paint, sealers, substrate coatings, existing floor covering adhesive residues (if any), and other substances that are incompatible with adhesives using mechanical methods recommended by manufacturer. Do not use solvents.
- D. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates. Surface shall be smooth, level and at proper elevation. Where floor elevation transitions are required use trowelable leveling and patching compound and apply with a smooth, uniform, transitional ramp length of 10 feet unless otherwise acceptable to the Architect.
1. Terrazzo and Tile Flooring Transitions: Use trowelable leveling and patching compound and apply with a smooth, uniform, transitional ramp such that at point of transition it is flush with adjacent terrazzo or floor tile, and to the satisfaction of the Architect. Transitional ramp shall not be more than 1/8-inch in 10 feet.

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- E. Broom and vacuum clean substrates to be covered immediately before installing resilient flooring.
- F. Resilient flooring installation shall not commence until painting and finishing work are complete and ceiling and overhead work is tested, approved, and completed.
- G. Apply primer to concrete slabs, if recommended by the flooring manufacturer, prior to application of padding or adhesive.

3.4 INSTALLATION

- A. Lay out sheets so sheets 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 sheets square with room axis unless otherwise indicated. .
- B. Match sheets for color and pattern by selecting sheets from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, torn, or deformed sheets.
- C. Scribe, cut, and fit sheets to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings. Extend unexposed edges of flooring under set on bases and similar trim work.
- D. Extend sheets into toe spaces, door reveals, closets, and similar openings.
- E. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor sheets as marked on substrates. Use chalk or other nonpermanent, non-staining marking device.
- F. Adhere sheets to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation which is smooth, clean and free from imperfections such as open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections. After installation, run a joint roller over all joints lengthwise and crosswise with a minimum pressure of 165 pounds.
- G. Manufacturer's representative on-site: A manufacturer's representative shall be on-site throughout the entire installation.
 - 1. Coordinate the timing of the installation with the manufacturer's representative so that there is adequate notice.

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3.5 CLEANING AND PROTECTION

- A. Perform the following operations immediately after completing resilient product installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.

- B. Sealer Application: Follow manufacturer's complete recommendations for the application of two coats:
 - 1. Treat the floor with sealer directly after installation. Thoroughly clean the floor and let it dry before application. Refer to manufacturer's instructions for details.
 - 2. Application shall be performed at ambient temperature.
 - 3. Spread an even layer of sealer using tools specifically developed for the application of the sealer.
 - 4. Apply two coats sealer. Spread and roll each coat in opposite directions from the other.
 - 5. Do not walk on the installation until at least 4 hours after application completion.

- C. Do not place furniture on the completed sealed installation until at least 24 hours after the final sealer application.

- D. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer.
 - 1. Cover products installed on horizontal surfaces with undyed, untreated building paper until Final Acceptance.
 - 2. Do not move heavy and sharp objects directly over surfaces. Place hardboard or plywood panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

END OF SECTION 09 65 20