

PART 1 - GENERAL

1.1 SUMMARY

1. Types of items described in this Section:
 1. Static-Dissipative Solid vinyl floor tile.
 2. Vinyl composition floor tile.
2. Related Work:
 1. Division 09 Section *Resilient Base and Accessories* for resilient base, reducer strips, and other accessories installed with resilient floor coverings.
3. Types of items not described in this Section:
 1. Resilient terrazzo floor tile.
 2. Resilient sheet floor coverings.
 3. Linoleum floor coverings.
 4. Resilient floor coverings designed to control electrostatic discharge.
 5. Resilient floor coverings for use in athletic-activity or support areas.

1.2 ACTION SUBMITTALS

1. Product Data: For each type of product indicated.
2. Samples for Verification: Full-size units of each colour and pattern of floor tile required.
 1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 230 mm long, of each colour required.
3. Seam Samples: For seamless-installation technique indicated and for each flooring product, colour, and pattern required; with seam running lengthwise and in center of 150-by-230 mm Sample applied to a rigid backing and prepared by Installer for this Project.

1.3 INFORMATIONAL SUBMITTALS

1. Qualification Data: For qualified Installer.

1.4 CLOSEOUT SUBMITTALS

1. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.5 MATERIALS MAINTENANCE SUBMITTALS

1. 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 1 box for every 50 boxes or fraction thereof, of each type, colour, and pattern of floor tile installed.

1.6 QUALITY ASSURANCE

1. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation indicated.

2. Mock-ups: Build mock-ups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 1. Build mock-ups for floor tile including resilient base and accessories.
 1. Size: Minimum 9.3 sq. m for each type, colour, and pattern in locations directed by Public Works Representative.

1.7 DELIVERY, STORAGE, AND HANDLING

1. 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 10 deg C or more than 32 deg C. Store floor tiles on flat surfaces.

1.8 PROJECT CONDITIONS

1. Maintain ambient temperatures within range recommended by manufacturer, but not less than 21 deg C or more than 35 deg 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.
2. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 13 deg C or more than 35 deg C.
3. Close spaces to traffic during floor tile installation.
4. Close spaces to traffic for 48 hours after floor tile installation.
5. Install floor tile after other finishing operations, including painting, have been completed.

1.9 EXTRA MATERIALS

1. 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 1 box for every 50 boxes or fraction thereof, of each type, colour, and pattern of floor tile installed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

1. Static-Dissipative Properties: Provide static-control resilient flooring with static-control properties indicated as determined by testing identical products per test method indicated by an independent testing and inspecting agency.
 1. Electrical Resistance: Test per ASTM F 150 with 100-V applied voltage.
 1. Average greater than 1 megohm and less than or equal to 1000 megohms when test specimens are tested surface to ground.
 2. Average greater than 1 megohm and less than or equal to 1000 megohms when installed floor coverings are tested surface to ground.
 2. Static Generation: Less than **300 V** when tested per AATCC-134 at 20 percent relative humidity with conductive footwear.
 3. Static Decay: 5000 to zero V in less than **0.25** seconds when tested per FED-STD-101C/4046.1.

2. FloorScore Compliance: Resilient tile flooring shall comply with requirements of FloorScore Standard.

2.2 SOLID VINYL FLOOR TILE

1. Tile Standard: ASTM F 1700.
2. Unless otherwise noted, provide tile having the following characteristics:
 1. Class I, monolithic vinyl tile.
 2. Thickness: 3.2 mm.
 3. Size: 305 by 305 mm.
 4. Colour and pattern: Chosen by Public Works Representative from manufacturer's full range.

2.3 INSTALLATION MATERIALS

1. Trowelable Levelling and Patching Compounds
 1. Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.
2. Adhesives
 1. Water-resistant type recommended by manufacturer to suit floor tile and substrate conditions indicated.
 2. Use adhesives that comply with the following limits for VOC content:
 1. VCT and Asphalt Tile Adhesives: Not more than 50 g/L.
 2. Rubber Floor Adhesives: Not more than 60 g/L.
3. Floor Polish
 1. Provide protective liquid floor polish products as recommended by manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

1. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
2. 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.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

1. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
2. 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 manufacturer. Do not use solvents.
 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.

4. Moisture Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
3. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
4. Fill cracks, holes, and depressions in substrates with trowelable levelling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
5. Do not install floor tiles until they are same temperature as space where they are to be installed.
 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
6. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

3.3 FLOOR TILE INSTALLATION

1. Comply with manufacturer's written instructions for installing floor tile.
2. 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 unless noted otherwise.
3. Match floor tiles for colour and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
 1. Lay tiles with grain running in one direction, unless noted otherwise.
4. 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.
5. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
6. 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, nonstaining marking device.
7. 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 colour 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.
8. 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.

3.4 CLEANING AND PROTECTION

1. Comply with manufacturer's written instructions for cleaning and protection of floor tile.
2. 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.

3. Damp-mop surfaces to remove marks and soil.
3. Protect floor tile products from marks, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
4. Floor Polish: Remove soil, visible adhesive and surface blemishes from floor tile surfaces before applying liquid floor polish.
 1. Apply three coat(s), unless specifically not recommended by flooring manufacturer.
5. Cover floor tile until Substantial Completion.

END OF SECTION