

CONSTRUCTION STANDARD SPECIFICATION

SECTION 09651

RESILIENT TILE FLOORING

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PART 1 - GENERAL

1.01 SUMMARY

- A. Extent of resilient flooring work is shown and scheduled on Contract documents. This section includes the following:
 - 1. Vinyl composition floor tile.
 - 2. Resilient wall base and accessories.
- B. Related Section: Refer to the following sections for related work.
 - 1. Section 03300, "Cast-In-Place Concrete" for subfloor finish requirements.
 - 2. Section 06100, "Rough Carpentry" for plywood underlayment requirements.

1.02 REFERENCES

- A. American Society of Testing and Materials (ASTM)
 - E648 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
 - F710 Practice for Preparing Concrete Floors and other Monolithic Floors to Receive Resilient Flooring
 - F1066 Specification for Vinyl Composition Floor Tile
- B. Federal Specification (FS)
 - RR-T-650 Treads, Metallic and Nonmetallic, Skid-Resistant
 - SS-W-40 Wall Base: Rubber, and Vinyl Plastic

1.03 SUBMITTALS

- A. General: Submit the following in accordance with conditions of Contract and Section 01330, "Submittal Procedures."
- B. Product Data: Submit manufacturer's product literature and installation instructions for each type of product specified.
- C. Samples for Initial Selection: Manufacturer's sample sections showing full range of standard colors and patterns available for each type of product indicated.
- D. Product Certificates: Signed by manufacturers of resilient products certifying that each product furnished complies with requirements.
- E. Maintenance Data: For resilient floor tile, to include in maintenance manuals specified in Division 1.
- F. Leed Submittals:
 - 1. Credit EQ 4.1: Manufacturers' product data for adhesives, including printed statement of VOC content

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum three years of experience in installing resilient products similar to those required for this Project.
- B. Source Limitation: 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 Work.
- C. Fire Test-Response Characteristics: Provide products with the following characteristic as determined by testing identical products per indicated test method.

Critical Radiant Flux: ASTM E648, 0.45w/sq. cm or greater.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to Project site in manufacturer's original, unopened cartons and containers, each bearing names of product and manufacturer, Project identification, and shipping and handling instructions.
- B. Store products in dry spaces protected from the weather, with ambient temperatures maintained between 50 and 90 degrees F (10 and 32 degrees C).
- C. Store tiles on flat surfaces.
- D. Move products into spaces where they will be installed at least 48 hours before installation, unless longer period is recommended in writing by manufacturer.

1.06 PROJECT CONDITIONS

- A. Maintain temperature of not less than 70 degrees F (21 degrees C) or more than 95 degrees F (35 degrees C) in spaces to receive products 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 postinstallation period, maintain temperature of not less than 55 degrees F (13 degrees C) or more than 95 degrees F.

- B. Do not install products until they are at same temperature as space where they are to be installed.
- C. Close spaces to traffic during flooring installation, and for time period after installation recommended in writing by manufacturer.
- D. Install tiles and accessories after other finishing operations, including painting, are completed.
- E. Where demountable partitions and other items are indicated for installation on top of resilient tile flooring, install tile before these items are installed.
- F. Do not install flooring over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive, as determined by flooring manufacturer's recommended bond and moisture test.

1.07 EXTRA MATERIALS

- B. There is no requirement for extra materials if the tiles and/or base that has been selected for the project is from Manufacturers standard product line.
- A. Otherwise, for custom products 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. Floor Tile: Furnish 1 box for every 50 boxes or fraction thereof, of each type, color and pattern of floor tile installed.
 - 2. Resilient Wall Base and Accessories: Furnish not less than 10 linear feet (3 linear m) for every 500 linear feet (150 linear m) or fraction thereof, of each type, color, pattern and size of resilient product installed.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

Available Manufacturers: Subject to compliance with requirements, provide products by the following:

- A. Resilient Floor Tile and Accessories

Armstrong World Industries, Inc.
Azrock Industries, Inc.

Congoleum Corporation
Mannington, Inc.
Tarkett, Inc.

B. Resilient Accessories

Marley Flexco Co.
Johnsonite, Inc.
Musson Rubber Co.
Roppe Corporation

2.02 VINYL COMPOSITION FLOOR TILE

Manufacturer's standard products complying with ASTM F1066, Composition 1. For replacement of damaged existing tile, size and color shall match that of existing tile.

- A. Minimum Nominal Thickness: 1/8 inch (3.18 mm).
- B. Size: 12 inch by 12 inch (305 mm by 305 mm).
- C. Color and Pattern: As selected from manufacturer's standard range of colors at time of submittals, unless otherwise indicated in Contract documents.
- D. Class: Class 1, 2, or 3.
- E. Wearing Surface: Smooth.

2.03 RESILIENT ACCESSORIES

- A. Vinyl Wall Base: FS SS-W-40, Type II, Class 1.
 - 1. Height: 4 inches (102 mm).
 - 2. Minimum Thickness: 0.080 inch (2.03 mm).
 - 3. Lengths: Cut lengths 48 inches (1219 mm) or 120 feet (37 m) rolls.
 - 4. Color and Pattern: As selected from manufacturer's standard range of colors at time of submittals, unless otherwise indicated in Contract documents.
 - 5. Style: Cove.
 - 6. Surface: Smooth.
- B. Rubber Stair Treads: FS RR-T-650, Composition A.
- C. Risers: Products of same manufacturer as stair treads.
- D. Stringers: Products of same manufacturer as stair treads.

2.04 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland-cement-based formulation approved by flooring manufacturer for applications indicated.
- B. Stair Tread-Nose Filler: Two-part epoxy compound recommended by resilient tread manufacturer to fill nosing substrates that do not conform to tread contours.
- C. Adhesives: Water-resistant type recommended by manufacturer compatible with resilient products and substrate.
- D. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edge of tiles, and in maximum available lengths to minimize running joints.
- E. Reducing Strips: Provide the following, in color as selected from manufacturer's standard range of colors at time of submittals.
 - 1. Vinyl or rubber reducing (edge) strips at exposed edges of tiles, no less than 1 inch (25 mm) wide with beveled forward edge, of same thickness as floor covering material.
 - 2. Rubber or vinyl reducing (transition) strips where applied flooring abuts ceramic tile, approximately 2 inches (51 mm) wide, with edge thickness matched to respective floor thickness.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions where installation of resilient products will occur, with Installer present, for compliance with manufacturer's requirements.
 - 1. Verify that substrates and conditions are satisfactory for resilient product installation and comply with requirements specified.
 - 2. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F710 and the following:
 - 1. Slab substrates are dry and free of dust, solvent, scaly paint, wax, oil, grease, asphalt, sealing compounds, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by flooring manufacturer.
 - 2. Subfloor finishes comply with requirements specified in Section 03300, "Cast-In-Place Concrete" for slabs receiving resilient flooring.
 - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
 - 4. New concrete slabs are properly cured and thoroughly dry before installation.
- C. Wood Subfloors: Verify the following:

1. Underlayment over subfloor complies with requirements specified in Section 06100, "Rough Carpentry."
2. Underlayment surface is free of irregularities and substances that may interfere with adhesive bond, show through surface, or stain flooring.

3.02 PREPARATION

- A. General: Comply with resilient product manufacturer's written installation instructions for preparing substrates indicated to receive resilient products.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- C. Use stair-tread-nose filler, according to resilient tread manufacturer's written instructions, to fill nosing substrates that do not conform to tread contours.
- D. Remove coatings, including curing compounds, and other substances that are incompatible with flooring adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- E. Broom and vacuum clean substrates to be covered immediately before installing resilient products. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.03 INSTALLATION

- A. General: Comply with tile manufacturer's written installation instructions.
- B. Vinyl Composition Tile: Lay out 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 at perimeter that equal less than one-half of a tile.
 1. Install tiles square with room axis, unless otherwise noted on Contract documents.
 2. Match tiles for color and pattern by selecting tiles from cartons in same sequence as manufactured and packaged, if so numbered.
 3. Cut tiles neatly around fixtures.
 4. Discard broken, cracked, chipped, or deformed tiles.
 5. Lay tiles in pattern of colors and size indicated on Contract documents.
- C. Scribe, cut and fit tiles to butt neatly and tightly to vertical surfaces and permanent fixtures, including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.
- D. Extend tiles 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 finish flooring as marked on subfloor. Use chalk or other nonpermanent, nonstaining marking device.
- F. Install tiles on covers for telephone and electrical ducts, and similar items in finished floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on covers. Tightly adhere edges to perimeter of floor around covers and to covers.
- G. Adhere tiles to flooring substrates using a full spread of adhesive applied to substrate to comply with tile manufacturer's written instructions, including those for trowel notching, adhesive mixing, and adhesive open and working times.

Provide completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.04 RESILIENT ACCESSORY INSTALLATION

- A. General: Install resilient accessories according to manufacturer's written installation instructions.
- B. Apply resilient wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
 - 1. Install wall base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
 - 2. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
 - 3. Do not stretch base during installation.
 - 4. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient wall base with manufacturer's recommended adhesive filler.
 - 5. Form outside corners on job from straight pieces of maximum lengths possible, without whitening at bends. Shave back of base at points where bends occur, and remove strips perpendicular to length of base that are only deep enough to produce snug fit without removing more than half the wall base thickness.
 - 6. Form inside corners on job from straight pieces of maximum lengths possible, by cutting inverted V-shaped notch in toe of wall base at point where corner is formed. Shave back of base where necessary to produce snug fit to substrate.
- C. Place resilient accessories so they are butted to adjacent materials and bond to substrates with adhesive. Install reducer strips or metal edge strips at edges of flooring that would otherwise be exposed.
- D. Apply resilient products to stairs as indicated, and according to manufacturer's written installation instructions.

3.05 CLEANING

- A. Perform the following operations immediately after installing resilient products:
 - 1. Remove adhesive and other surface blemishes using cleaner recommended by resilient product manufacturers.
 - 2. Sweep or vacuum floor thoroughly.
 - 3. Do not wash floor until after time period recommended by tile manufacturer.
 - 4. Damp-mop floor to remove marks and soil.
 - 5. Apply 3 coats of high quality acrylic commercial floor polish as recommended by the resilient 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.

END OF SECTION