

SECTION 09 30 13

CERAMIC TILE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Porcelain tile.
 - 2. Glazed ceramic wall tile.
 - 2. Waterproof membrane for thin-set tile installations.
 - 3. Stone thresholds.

1.2 RELATED SECTIONS

- A. 09 21 16 "Gypsum Board Assemblies."
- B. 09 30 50 "Tile Setting Materials and Accessories."

1.3 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints.
- C. Samples:
 - 1. Each type, composition, and finish of tile.
 - 2. Full range of colors for selection by the owner.

1.4 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under sample Submittals.
 - 1. Build mockup of each type of wall tile installation.
 - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 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. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each type, composition, color, pattern, and size indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.

2.2 TILE PRODUCTS

- A. Manufacturers:
1. American Marazzi Tile, Inc.
 2. American Olean; Div. of Dal-Tile International Corp.
 3. Buchtal Corporation USA.
 4. Cerim-Floor Gres Ceramiche.
 5. Crossville Ceramics Company, L.P.
 6. Daltile; Div. of Dal-Tile International Inc.
 7. Florida Tile Industries, Inc.
 8. GranitiFiandre.
 9. Interceramic.
 10. KPT, Inc.
 11. Laufen USA.
 12. Lone Star Ceramics Company.
 13. Metropolitan Ceramics.
 14. Monarch Tile, Inc.
 15. Porcelanite, Inc.
 16. Quarry Tile Company.
 17. Seneca Tiles, Inc.
 18. Summitville Tiles, Inc.
 19. United States Ceramic Tile Company.
 20. Winburn Tile Manufacturing Company.
- B. ANSI Ceramic Tile Standard: Provide Standard grade tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.
- C. Wall Tile: Basis-of-Design:
1. Wall tile: Daltile, 6x6 – matte finish – Field: 0766 Urban Putty; Accent: 0744 Artesian Brown; Grout; Mapai #35 Navajo Brown.
- D. Wall & Floor Tile Trim Units: Basis of Design:
1. Floor and wall corners: Schluter Trim

E Floor Tile: Basis of Design:

1. Floor tile: Daltile, Industrial Park – Field: IP06 Natural Beige; Accent: IP08 Chestnut Brown, provide pattern detail in drawings.

2.3 ACCESSORY MATERIALS

A. Thresholds: Fabricate to provide transition between adjacent floor finishes. Bevel edges at 1:2 slope, limit height of bevel to 1/4 inch (12.7 mm) or less, and finish bevel to match face of threshold.

1. Marble Thresholds: ASTM C 503 with a minimum abrasion resistance of 10 per ASTM C 1353 or ASTM C 241 and with honed finish.
 - a. Description: Uniform, fine- to medium-grained white stone with gray veining. Grade A First Quality, Free from cracks, chips, stains or defects.

B. Waterproofing and Crack-Suppression Membranes for Thin-Set Tile Installations: Manufacturer's standard product that complies with ANSI A118.10, selected from the following] and approved by Manufacturer.

1. Chlorinated-Polyethylene-Sheet Product: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric, 0.030-inch (0.76-mm) nominal thickness.
 - a. Basis of Design Product: Noble Company (The); Nobleseal TS.
2. PVC-Sheet Product: Two layers of PVC sheet heat-fused together and to facings of bondable nonwoven polyester, 0.040-inch (1.01-mm) nominal thickness.
 - a. Basis of Design Product: Compotite Corporation; Composeal Gold.
3. Polyethylene-Sheet Product: Polyethylene faced on both sides with fleece webbing, 0.008-inch (0.203-mm) nominal thickness.
 - a. Basis of Design Product: Schluter Systems L.P.; KERDI.
4. Corrugated-Polyethylene Product: Polyethylene with dovetail-shaped corrugations and with anchoring webbing on the underside, 3/16-inch (4-mm) nominal thickness.
 - a. Basis of Design Product: Schluter Systems L.P.; DITRA.
5. Fabric-Reinforced, Modified-Bituminous Sheet Product: SBS-modified-bituminous sheet with woven reinforcement facing, 0.040-inch (1.01-mm) nominal thickness.
 - a. Basis of Design Product: National Applied Construction Products, Inc.; Strataflex.
6. Fabric-Reinforced, Fluid-Applied Product: Liquid-latex rubber with fabric reinforcement.
 - a. Basis of Design Products:

- 1) Custom Building Products; Trowel & Seal Waterproofing and Anti-Fracture Membrane.
 - 2) LATICRETE International Inc.; Laticrete 9235 Waterproof Membrane.
 - 3) MAPEI Corporation; PRP M19.
 - 4) Summitville Tiles, Inc.; S-9000.
7. Unreinforced, Fluid-Applied Product: Liquid-latex rubber.
- a. Basis of Design Products:
 - 1) Boiardi Products Corporation; Elastiment 644.
 - 2) Custom Building Products; LevelQuick Waterproofing and Anti-Fracture Membrane.
 - 3) Jamo Inc.; Waterproof.
8. Latex-Portland Cement Product: Flexible mortar with acrylic-latex additive.
- a. Basis of Design Products:
 - 1) Boiardi Products Corporation; Elastiment 323.
 - 2) MAPEI Corporation; PRP 315.
 - 3) Southern Grouts & Mortars, Inc.; Southcrete 1100.
 - 4) TEC Specialty Products Inc.; TA-324, Triple Flex.
9. Urethane Waterproofing and Tile-Setting Adhesive: One-part liquid-applied urethane.
- a. Basis of Design Products:
 - 1) Bostik; Hydroment Ultra-Set.
 - 2) Southern Grouts & Mortars, Inc.; Deck-Seal 1000.

2.4 SETTING AND GROUTING MATERIALS

A. Manufacturers:

1. Schluter Systems
2. Atlas Minerals & Chemicals, Inc.
3. Boiardi Products Corporation.
4. Bonsal, W. R., Company.
5. Bostik.
6. C-Cure.
7. Custom Building Products.
8. DAP, Inc.
9. Jamo Inc.
10. LATICRETE International Inc.
11. MAPEI Corporation.
12. Southern Grouts & Mortars, Inc.
13. Summitville Tiles, Inc.
14. TEC Specialty Products Inc.

15. Approved equal.
 - B. Dry-Set Portland Cement Mortar (Thin Set): ANSI A118.1.
 1. For wall applications, provide nonsagging mortar.
 - C. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
 1. Prepackaged dry-mortar mix containing dry additive to which only water must be added.
 2. Prepackaged dry-mortar mix combined with liquid-latex additive.
 3. For wall applications, provide nonsagging mortar.
 - D. Chemical-Resistant, Water-Cleanable, Tile-Setting and -Grouting Epoxy: ANSI A118.3.
 - E. Water-Cleanable, Tile-Setting Epoxy Adhesive: ANSI A118.3.
 - F. Organic Adhesive: ANSI A136.1, Type I.
 - G. Standard Sanded Cement Grout: ANSI A118.6, color as indicated.
 - H. Standard Unsanded Cement Grout: ANSI A118.6, color as indicated.
 - I. Polymer-Modified Tile Grout: ANSI A118.7, color as indicated.
 1. Polymer Type: Dry, redispersible form, prepackaged with other dry ingredients.
 2. Polymer Type: Liquid-latex form for addition to prepackaged dry-grout mix.
 - J. Grout for PregROUTED Tile Sheets: Same silicone rubber used in factory to pregROUT tile sheets.
- 2.5 MISCELLANEOUS MATERIALS
- A. Elastomeric Sealants: Elastomeric sealants of base polymer and characteristics indicated that comply with applicable requirements in Division 7 Section "Joint Sealants."
 1. One-Part, Mildew-Resistant Silicone: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, O; formulated with fungicide, intended for in-service exposures of high humidity and extreme temperatures.
 - a. Products:
 - 1) Dow Corning Corporation; Dow Corning 786.
 - 2) GE Silicones; Sanitary 1700.
 - 3) Pecora Corporation; Pecora 898 Sanitary Silicone Sealant.
 - 4) Tremco, Inc.; Tremsil 600 White.
 2. Multipart, Pourable Urethane Sealant for Use T: ASTM C 920; Type M; Grade P; Class 25; Uses T, M, A, and, as applicable to joint substrates indicated, O.
 - a. Products:
 - 1) Bostik; Chem-Calk 550.

- 2) Mameco International, Inc.; Vulkem 245.
 - 3) Pecora Corporation; NR-200 Urexpan.
 - 4) Tremco, Inc.; THC-900.
- B. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials.
- C. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints that does not change color or appearance of grout.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.
- B. Fill cracks, holes, and depressions with trowelable leveling and patching compound according to tile-setting material manufacturer's written instructions.
- C. Remove protrusions, bumps, and ridges by sanding or grinding.
- D. Blending: For tile exhibiting color variations, use factory blended tile or blend tiles at Project site before installing.
- E. Field-Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.2 INSTALLATION, GENERAL

- A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules.
- B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated in ceramic tile installation schedules.
- C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Grind cut edges of tile abutting trim, finish, or built-in items. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- E. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both

directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.

- F. Lay out tile wainscots to next full tile beyond dimensions indicated.
- G. Expansion Joints: Locate expansion joints and other sealant-filled joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
 - 1. Locate joints in tile surfaces directly above joints in concrete substrates.
 - 2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."
- H. Grout tile to comply with requirements of ANSI A108.10, unless otherwise indicated.
 - 1. For chemical-resistant epoxy grouts, comply with ANSI A108.6.
- I. At showers, tubs, and where indicated, install cementitious backer units and treat joints to comply with ANSI A108.11.
- J. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness bonded securely to substrate.
 - 1. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.
- K. Stone Thresholds: Install stone thresholds at locations indicated; set in same type of setting bed as abutting field tile, unless otherwise indicated.
 - 1. Set thresholds in latex-portland cement mortar for locations where mortar bed would otherwise be exposed above adjacent nontile floor finish.
- L. Install tile on walls with the following joint widths:
 - 1. Glazed Wall Tile: 1/16 inch (1.6 mm).
- M. Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer that has gotten on tile faces by wiping with soft cloth.

END OF SECTION

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