



SECTION 09 30 00
TILE AND STONE SETTING MATERIALS AND ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Setting materials.
- B. Grout materials.
- C. Waterproof membrane.
- D. Crack isolation membrane.
- E. Flexible sealant.
- F. Penetrating grout sealers.
- G. Penetrating tile and stone sealers.
- H. Topical stone sealer and finishes.
- I. Tile and stone maintenance, cleaners and grout haze removers.

1.2 RELATED SECTIONS

- A. Section 09 30 00 - Tiling.
- B. Section 07 14 16 – Cold fluid applied waterproofing.

1.3 REFERENCES

- A. ANSI A108 Series/A118 Series - American National Standards for Installation of Ceramic Tile.
- B. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
- C. ASTM C 150 - Standard Specification for Portland Cement.
- D. TCNA (HB) - Handbook for Ceramic Tile Installation; Tile Council of North America.
- E. ISO 13007 - International Standards Organization; classification for Grout and Adhesives.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. [Product Data]: Manufacturer's technical information for each product specified.
- C. Samples: Color charts for selection of grout.
- D. Installation Instructions: Manufacturer's printed instructions for each product.

1.5 QUALITY ASSURANCE

- A. Provide cleaners, sealing and maintenance products as well as tile grout, setting materials, additives, and factory-prepared dry-set mortars from the same manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Prevent damage or contamination to materials by water, freezing, foreign matter or other causes.
- B. Do not use frozen materials unless specifically allowed by manufacturer.
- C. Deliver and store materials on site at least 24 hours before work begins.
- D. Provide heated and dry storage facilities on site.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- B. Maintain temperatures at not less than 50 deg F (10 deg C) in tiled areas during installation and for 7 days after completion, unless higher temperatures are required by referenced installation standards or manufacturer's written instructions.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: MAPEI Americas USA, which is located at : 1144 E. Newport Center Dr.; Deerfield Beach, FL 33442; Toll Free Tel: 800-42-MAPEI; Tel: 954-246-8888; Contact: Mike Granatowski (9490 212-2363 email: mgranatowski@mapei.com)
- B. Acceptable Manufacturer: Daltile Corporation 7834 C.F. Hawn Freeway, Dallas, TX 75217 Contact Fred Davis; (972) 690-5724 email:fred.davis@daltile.com
- C. Substitutions: Not permitted.

2.2 TILE

- A. Subject to conformity with the enclosed requirements, provide products coming from the following manufacturer.
 - 1. Daltile Xterior Paver
 - a. Collection
 - b. Size
 - c. Color
 - d. Finish
 - e. Rectified
 - f. Product number
 - g. Special Shapes

2.3 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
 - 1. Cleavage Membrane: Asphalt felt, ASTM D 226, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils (0.1 mm) thick.
 - 2. Reinforcing Wire Fabric: Galvanized, welded wire fabric, 2 by 2 inches (50.8 by 50.8 mm) by 0.062-inch (1.57-mm) diameter; comply with ASTM A 185 and ASTM A 82

except for minimum wire size.

3. Factory blended Polymer-Modified Thick-Bed and Render Mortar
 - a. Product: Subject to compliance with requirements, provide MAPEI Corporation; Modified Mortar Bed.
- B. Modified Dry-Set Cement Mortar, Rapid-Setting Tile: ANSI A118.15, ANSI A118.4-A118.11 and ISO 13007; C2FP1. (For Moderate Climate – GOOD Application)
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation "Ultraflex RS".
- C. Modified Dry-Set Cement Mortar, Lightweight, Non-Sag, for Large and Heavy Tile, rapid setting: ANSI A118.4-A118.11 and ISO 13007; C2FS1P1. (For Moderate Climate – BETTER Application)
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation "Ultraflex LFT Rapid".
- D. Improved Modified Dry-Set Cement Mortar for Large and Heavy Tile, Rapid Setting ANSI A118.15-A118.11 and ISO 13007; C2TFS2P2. (for Moderate Climate BEST Application, Freeze / Thaw Applications MUST USE).
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation "Granirapid System".

2.4 GROUT MATERIALS

- A. Factory Blended, Polymer-Modified Tile Grout for grout joints from 1/16 inch to 3/4 inch (1.5 mm to 19 mm) and meeting ANSI A118.7 and ISO 13007; CGWAF.
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation "Ultracolor Plus FA".

2.5 WATERPROOF / CRACK ISOLATION MEMBRANE

- A. General: Manufacturer's standard product that complies with ANSI A118.10 and ANSI A118.12 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation materials.
- B. Fluid-Applied Membrane: Liquid-latex rubber or elastomeric polymer.
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation, Mapelastastic AquaDefense. (For Moderate Climate – BETTER Application)
- C. Latex-Portland Cement: Flexible mortar consisting of cement-based mix and latex additive.
 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Mapelastastic 315. For Moderate Climate or Freeze / Thaw Climate – BEST Application).

2.6 FLEXIBLE SEALANT

- A. Professional-grade, 100%-silicone sealant specifically formulated for heavy traffic expansion and movement joints, horizontal and vertical complying with ASTM standards; slump (ASTM C639), tack-free time (ASTM C679,) shore "A" hardness (ASTM C661), joint movement (ASTM C920), elongation at break (ASTM D412), flexibility (ASTM C734) and passes weatherability (Accelerated Weathering Tester QUV).
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation, Mapesil T.

2.7 PENETRATING GROUT SEALERS

- A. Water-based penetrating sealer; premium, natural-look, that provides maximum protection for interior and exterior natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), unglazed ceramic tile, masonry. Can also be used as a pre-grouting sealer; MAPEI, "UltraCare Penetrating Plus Stone, Tile & Grout Sealer."

2.8 PENETRATING TILE AND STONE SEALERS

- A. Solvent-based penetrating sealer; premium, natural-look, that uses VOC-exempt materials and will provide maximum protection on interior and exterior natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), unglazed and porcelain ceramic tile, masonry and grout. Can be used as a pre-grouting sealer (grout-release); MAPEI, "UltraCare Penetrating Plus SB Stone & Porcelain Tile Sealer".

2.9 TILE AND STONE MAINTENANCE, CLEANERS AND GROUT HAZE REMOVERS

- A. Cement Grout Haze remover; professional-strength formulate removes cement grout haze from tile, concrete and stone surfaces. Non-acidic, low-odor, non-flammable, water based ; MAPEI, "UltraCare Cement Grout Haze Remover."

2.10 MIXES

- A. Proportion and mix materials in accordance with manufacturer's most current written instructions and applicable ANSI standards.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive tilework and conditions under which tile will be installed.
- B. Do not proceed with tilework until surfaces and conditions comply with requirements indicated in reference tile installation standard and manufacturer's printed instructions.

3.2 INSTALLATION

- A. Install tile in accordance with manufacturer's printed instructions and the applicable requirements of ANSI A108 Series for the materials being used.
- B. Install tile using TCNA methods specified on the drawings.
- C. Floor Tile per drawing locations: Install in accordance with TCNA method:
 - 1. TCNA F101 On Grade Bonded Mortar Bed Freeze/ Thaw or Moderate Climate

2. TCNA F102 Direct Bond on Grade Direct Bond Freeze / Thaw or Moderate Climate
 3. TCNA F103 B Freeze / Thaw or Moderate Climate Over Occupied Space
 4. TCNA F103 B Freeze / Thaw or Moderate Climate Over Un-Occupied Space
 5. TCNA F104 Freeze / Thaw or Moderate Climate Direct Bond Over Un-Occupied Space
- D. Install expansion and control joints in accordance with TCNA method EJ171.
- E. Apply tile and grout cleaners, sealers and maintenance products in accordance with manufacturer's printed instructions and technical data sheets.

3.3 GROUTING

- A. Grout joints in accordance with manufacturer's instructions and ANSI A108.10.
- B. Clean sanding water, dust, and foreign substances from joints to be grouted.
- C. Clean and dry tile surfaces.
- D. After grouting, remove all grout residue promptly.

3.4 PROTECTION

- A. Floors: Protect from all traffic for at least 72 hours after installation.
1. Do not step on floor for at least 24 hours; if traffic is unavoidable after that, use plywood stepping boards.
 2. Protect from heavy traffic for at least 7 days after installation.
 3. When fast-setting materials are used to allow faster occupancy, comply with the manufacturer's recommendations.
- B. Protect from food products and chemicals which can cause staining for at least 14 days.
- C. Protect from freezing and total water immersion for at least 21 days after installation.

END OF SECTION