

SECTION 09 30 00

SUSTAINABLE TILE AND STONE SETTING MATERIALS AND GROUT

\*\* NOTE TO SPECIFIER \*\* MAPEI Americas U.S.A.; mortars and grouts for ceramic tile, stone, porcelain, and other materials.
This section is based on the products of MAPEI Americas U.S.A., which is located at:
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Deerfield Beach, FL 33442
Toll Free Tel: 800-42-MAPEI
Tel: 954-246-8888
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Web:[www.mapei.com/US-EN](http://www.mapei.com/US-EN)
This section is based on the products of MAPEI Inc. Canada., which is located at:
2900 Francis-Hughes
Laval, PQ, Canada H7L3J5
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MAPEI manufactures a wide range of high performance tile and stone setting materials, many of which are specifically designed for difficult application conditions. Specifiers are urged to consult both the manufacturer's technical literature and the Tile Council of North America (TCNA) 'Handbook for Ceramic Tile Installation' for assistance in selection of products.

1. GENERAL
	1. SECTION INCLUDES
		1. Setting materials.
		2. Grout materials.
	2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* This section does not include any tile or stone materials; be sure that the required tile or stone materials are specified in another section. Delete sections below not relevant to this project; add others as required.

* + 1. Section 09 30 00 - Tiling.
		2. Section 09 75 00 - Stone Facing.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references below that are not actually required by the text of the edited section; add others as required.

* + 1. ANSI A108 Series/A118 Series - American National Standards for Installation of Ceramic Tile.
		2. ANSI A136.1 - American National Standard for Organic Adhesives for Installation of Ceramic Tile.
		3. ANSI A138.1 - American Standard Specifications for Sustainable Ceramic Tiles, Glass Tiles and Tile Installation Materials
		4. ASTM C 150 - Standard Specification for Portland Cement.
		5. TCNA (HB) - Handbook for Ceramic Tile Installation; Tile Council of North America.
		6. ISO 13007 - International Standards Organization; classification for Grout and Adhesives.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. [ Product Data ]: Manufacturer's technical information for each product specified.
		3. Samples: Color charts for selection of grout.
		4. Installation Instructions: Manufacturer's printed instructions for each product.
	2. QUALITY ASSURANCE
		1. Provide cleaners, sealing and maintenance products as well as tile grout, setting materials, additives, and factory-prepared dry-set mortars from the same manufacturer.
	3. DELIVERY, STORAGE AND HANDLING
		1. 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.
		2. Do not use frozen materials unless specifically allowed by manufacturer.
		3. Deliver and store materials on site at least 24 hours before work begins.
		4. Provide heated and dry storage facilities on site.
	4. PROJECT CONDITIONS

\*\* NOTE TO SPECIFIER \*\* Environmental conditions may have an effect on the final color of Portland cement grouts.

* + 1. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
		2. Vent temporary heaters to exterior to prevent damage to tilework from carbon dioxide build-up.

\*\* NOTE TO SPECIFIER \*\* Epoxy grouts require higher temperatures for successful installation.

* + 1. 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.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: MAPEI Americas, which is located at : 1144 E. Newport Center Dr.; Deerfield Beach, FL 33442; Toll Free Tel: 800-42-MAPEI; Tel: 954-246-8888; Fax: 954-246-8801; Email: request info (techservicerequests@mapei.com/US-EN); Web: www.mapei.com/US-EN
		2. Acceptable Manufacturer: MAPEI Americas, which is located at : 2900 Francis-Hughes Laval, PQ, Canada H7L 3J5; Toll Free Tel: 800-42-MAPEI; Tel: 954-246-8888; Fax: 954-246-8801; Email: request info (techservicerequests@mapei.com/CA-EN); Web: www.mapei.com/CA-EN
		3. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph above or below; coordinate with Division 1 requirements.

* + 1. Substitutions: Not permitted.

\*\* NOTE TO SPECIFIER \*\* Retain first option in "Urethane Crack Isolation Membrane and Tile-Setting Adhesive" Paragraph below if required for LEED-NC, LEED-CI, or LEED-CS Credit IEQ 4.1 or Credit IEQ 4.3; retain second option if required for LEED for Schools Credit IEQ 4. If retaining either option, verify that products comply.

* 1. SETTING MATERlALS
		1. Modified Dry-Set Cement Mortar, Lightweight, Non-Sag, for Large and Heavy Tile: Complying with ANSI A118.4-A118.1, ANSI A138.1 (Green Squared) and ISO 13007; C2TES1P1.
			1. Product: Subject to compliance with requirements, provide MAPEI Corporation "MAPEI Ultralite Mortar".
		2. Modified Dry-Set Cement Mortar, Lightweight, Non-Sag, for Large and Heavy Tile: Complying with ANSI A118.4-A118.11, ANSI A138.1 (Green Squared) and ISO 13007; C2TES1P1.
			1. Product: Subject to compliance with requirements, provide MAPEI Corporation "MAPEI Ultralite Mortar Pro".
		3. Modified Dry-Set Cement Mortar, Lightweight, Non-Sag, for Large and Heavy Tile: Complying with ANSI A118.4-A118.11, ANSI A138.1 (Green Squared) and ISO 13007; C2TES2P1.
			1. Product: Subject to compliance with requirements, provide MAPEI Corporation "MAPEI Ultralite S2".
		4. Modified Dry-Set Cement Mortar, Lightweight, Non-Sag, for Large and Heavy Tile: Complying with ANSI A118.4-A118.11, ANSI A138.1 (Green Squared) and ISO 13007; C2TFS2P1.
			1. Product: Subject to compliance with requirements, provide MAPEI Corporation "MAPEI Ultralite S1 Quick".
	2. GROUT MATERlALS

\*\* NOTE TO SPECIFIER \*\* Delete all of the following materials that are not required on the project. Special applications are listed first, followed by materials that can be used in many applications for most materials. Edit the "Applications" statements to accurately reflect the purposes the materials are intended for; if more than one type of grout is required on the project, edit the "Applications" statements so that the Contractor can tell which types are to be used in which locations.

\*\* NOTE TO SPECIFIER \*\* Ultra/Color can be used for grouting all types of ceramic tile, ceramic mosaics, quarry tile, brick pavers, slate, porcelain and most dimensional stones, with joints between 1/8 inch (2 mm) and 1 inch (25 mm), on the interior and exterior. It is a rapid curing high early strength, low shrinkage, polymer-modified proprietary mixture of cementitious compounds, select quartz aggregates and premium color-fast pigments. Ultra/Color is mixed by adding water only and achieves ANSI A118.6 28-day strength in 72 hours under manufacturer's prescribed project conditions. Do not use for conditions requiring high chemical or acid resistance. Do not use to grout non-vitreous glazed wall tile or polished stone.

* + 1. Factory Blended, Polymer-Modified Tile Grout for grout joints from 1/16 inch to 3/4 inch (1.5 mm to 19 mm) Complying with ANSI A118.7, ANSI A138.1 (Green Squared) and ISO 13007; CGWAF.
			1. Product: Subject to compliance with requirements, provide MAPEI Corporation "Ultracolor Plus FA".

\*\* NOTE TO SPECIFIER \*\* Retain first option in "Urethane Waterproofing and Tile-Setting Adhesive" Paragraph below if required for LEED-NC, LEED-CI, or LEED-CS Credit IEQ 4.1 or Credit IEQ 4.3; retain second option if required for LEED for Schools Credit IEQ 4. If retaining either option, verify that products comply.

* 1. MIXES
		1. Proportion and mix materials in accordance with manufacturer's most current written instructions and applicable ANSI standards.
1. EXECUTION
	1. EXAMINATION

\*\* NOTE TO SPECIFIER \*\* MAPEI has extensive surface preparation recommendations. Consult their Architectural Catalog for details.

* + 1. Examine surfaces to receive tilework and conditions under which tile will be installed.
		2. Do not proceed with tilework until surfaces and conditions comply with requirements indicated in reference tile installation standard and manufacturer's printed instructions.
	1. INSTALLATION
		1. Install tile in accordance with manufacturer's printed instructions and the applicable requirements of ANSI A108 Series for the materials being used.

\*\* NOTE TO SPECIFIER \*\* For ease of specifying installation methods refer to the Tile Council of America (TCA) "Handbook for Ceramic Tile Installation" for time-proven methods. Include the TCA method numbers either on the drawing details or list them in the specification, with a description of where each is to be used. Delete the following paragraph if TCA methods are not to be indicated on the drawings.

* + 1. Install tile using TCA methods specified on the drawings.

\*\* NOTE TO SPECIFIER \*\* The following paragraphs are examples of how to specify different TCA methods for different applications. Delete if TCA methods are shown on the drawings.

* + 1. Floor Tile at \_\_\_\_: Install in accordance with TCA method \_\_\_\_\_.
		2. Wall Tile at \_\_\_\_\_: Install in accordance with TCA method \_\_\_\_\_.
		3. Tile on Soffits at \_\_\_\_\_: Install in accordance with TCA method C311.
		4. Tile Countertops: Install in accordance with TCA method \_\_\_\_\_.
		5. Tile in Refrigerated Rooms: Install in accordance with TCA method SR612.
		6. Tile in Steam Rooms: Install in accordance with TCA method SR613.
		7. Tile on Stairs: Install in accordance with TCA method S151.
		8. Install expansion and control joints in accordance with TCA method EJ171.
		9. Apply tile and grout cleaners, sealers and maintenance products in accordance with manufacturer's printed instructions and technical data sheets.
	1. GROUTING
		1. Grout joints in accordance with manufacturer's instructions and ANSI A108.10.
		2. Clean sanding water, dust, and foreign substances from joints to be grouted.
		3. Clean and dry tile surfaces.
		4. After grouting, remove all grout residue promptly.
	2. PROTECTION

\*\* NOTE TO SPECIFIER \*\* The following are general recommendations for protection during construction. Specific applications and products may allow tiled areas to be occupied sooner.

* + 1. 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.
		2. Walls: Protect from impact, vibration and heavy hammering on adjacent and opposite walls for at least 14 days after installation, unless manufacturer's instructions allow a shorter period.
		3. Protect from food products and chemicals which can cause staining for at least 14 days.

\*\* NOTE TO SPECIFIER \*\* When dealing with cement-based products, it should be noted that temperature and humidity during and after installation of tile affect final curing time. That is, low temperatures -- 60 deg F (15 deg C) and under -- and high humidity -- 70 percent and above -- will delay final cure time.

* + 1. Protect from freezing and total water immersion for at least 21 days after installation.

END OF SECTION