

INTERIOR WALLS

Wood or Metal Studs

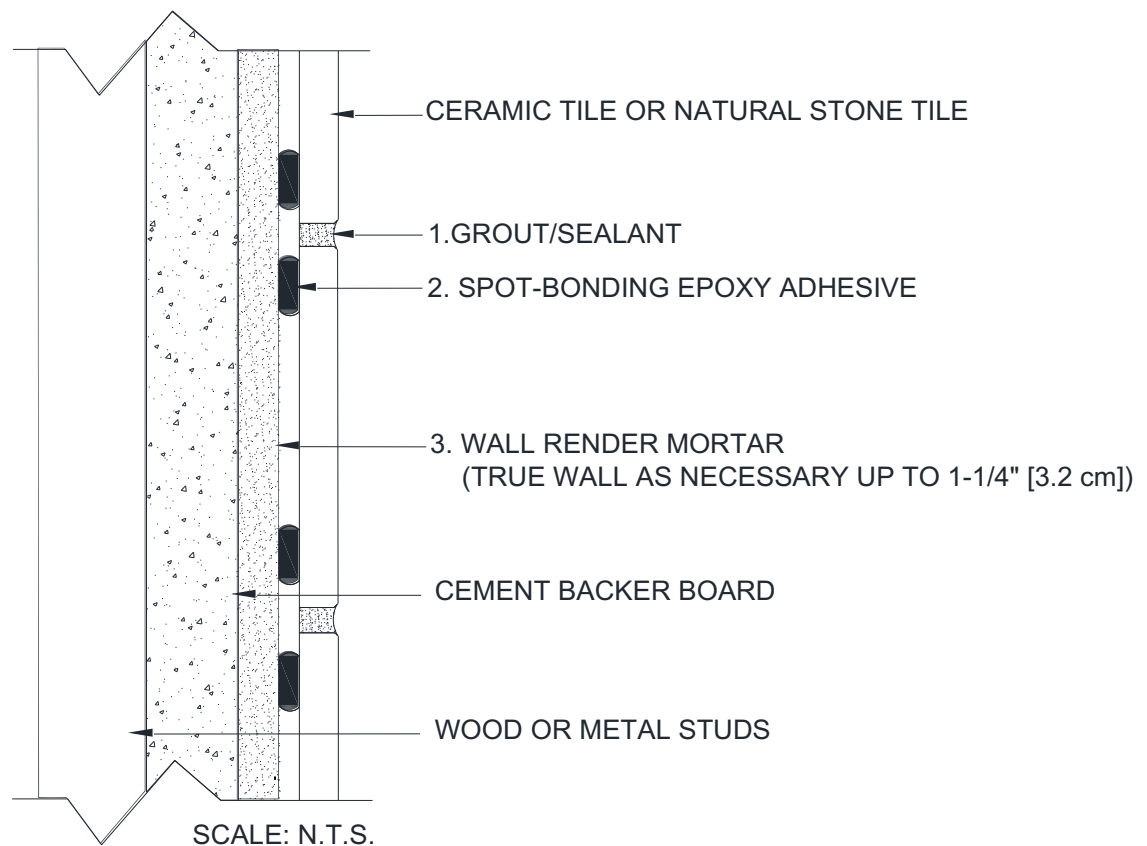
Cement Backer Board

Wall Render Mortar (as necessary)

Ceramic Tile, Natural Stone Tile

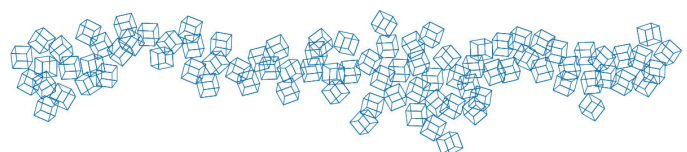
MAPEI: MW260 & MW260 STONE

TCNA: W260 & W260 STONE



MAPEI Products Assembly	TDS	SDS	ANSI	ISO 13007	Minimum Performance Requirements from TCNA Guidelines
1. Joint Filler: A. <i>Mapesil® T</i>	TDS	SDS			Cementitious Grout: ANSI A118.6 or better, or ISO 13007 CG1 or better
2. Spot-Bonding Epoxy Adhesive: A. <i>Kerapoxy® SB Rapid</i> B. <i>Kerapoxy® SB</i>	TDS TDS	SDS SDS	A118.3 A118.3	R2TF R2T	Epoxy Bond Coat: ANSI A118.3, or ISO 13007 R2T or better Movement Joints: EJ171 and ASTM C1193 Flexible Sealant: ANSI A118.01, 3.7 and ASTM C920
3. Wall Render Mortar: A. <i>Planitop® 330 Fast</i>	TDS	SDS			Environmental Classifications Res1; Com1
4. Flexible Sealant: A. <i>Mapesil T</i>	TDS	SDS			Materials for Green/Sustainable Design Installation Materials that meet ANSI A138.1, <i>The American National Standard Specifications for Sustainable for Sustainable Ceramic Tiles, Glass Tiles, and Tile Installation Materials.</i>

CAD details and/or specifications are provided as guides. They are intended to assist in the proper detailing or specifying of a project. They are not to scale or intended for construction. The guide specification must be reviewed for code compliance and edited to make it project-specific. Drawings are based on the Tile Council of North America's (TCNA) Handbook for Ceramic, Glass, and Stone Tile Installation and the Terrazzo, Tile and Marble Association of Canada's (TTMAC) Tile Installation Manual. MAPEI products are listed as options and are substituted for TCNA's and TTMAC's listed ANSI and ISO (ISO 13007) standards. For natural stone tiles, refer to Natural Stone Institute, TCNA Natural Stone Tile Selection and Installation Guide and consult stone tile supplier for suitability. Please refer to the referenced handbooks and current data sheets for complete instructions and application limitations. Some installation methods and component materials may not be referenced. MAPEI encourages the user to consult all approved resources to ensure a complete assembly.



Guide Specification: 09 30 33 – Stone Tiling
INTERIOR WALLS
Wood or Metal Studs
Cement Backer Board
Wall Render Mortar (as necessary)
Optional Waterproof/Crack Isolation Membrane
Natural Stone Tile

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED SECTIONS

- A. Section 04 20 00 – Unit Masonry; CMU wall substrates.
- B. Section 07 60 00 – Flashing and Sheet Metal.
- C. Section 07 92 13 – Elastomeric Joint Sealants.
- D. Section 09 34 00 – Waterproofing-Membrane Tiling.
- E. Section 09 75 00 – Stone Facing.

1.03 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI A108 Series/A118 Series – American National Standards for Installation of Ceramic Tile.
 - 2. ANSI A138.1 – American National Standard Specifications for Green Squared Certification for Tiles and Installation Materials.
- B. ASTM International (ASTM):
 - 1. ASTM A1064 – Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
 - 2. ASTM C144 – Standard Specification for Aggregate for Masonry Mortar. Jobsite mix.
 - 3. ASTM C150 – Standard Specification for Portland Cement. Jobsite mix.
 - 4. ASTM C109/C109M – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars; Using 2-inch (50-mm) Cube Specimens.

5. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members.
- C. NSI (DSDM) – Dimension Stone Design Manual; Natural Stone Institute.
- D. TCNA (HB) – Handbook for Ceramic Tile, Glass, and Stone Installation; Tile Council of North America.
- E. Specifications Guide 09 30 00 – Tile Installation Manual (TTMAC).
- F. International Organization for Standardization (ISO):
 1. ISO 13007 – Ceramic tiles – Grout and adhesives.
- G. Leadership in Energy and Environmental Design (LEED) – U.S. Green Building Council.

1.04 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 – Administrative Requirements.
- B. Product Data: Manufacturer's technical information for each product specified.
- C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.
- D. Samples: Color charts for selection of grout.
- E. Manufacturer's Certificates: Certify that products meet or exceed specified requirements. When applicable, submit a Master Grade Certificate signed by the manufacturer and the installer certifying that products meet or exceed the specified requirements of ANSI A137.1, ANSI A137.2, and/or ANSI A137.3.
- F. Installation Instructions: Manufacturer's printed instructions for each product.
- G. Maintenance Data: Include recommended cleaning methods, cleaning materials, and maintenance coatings.

1.05 QUALITY ASSURANCE

- A. Ensure Single-Source Warranty Requirements and Compatibility of Products: Provide cleaners, sealing and maintenance products, tile grout, setting materials, underlayments, additives, accessories and factory-prepared dry-set mortars from the same manufacturer.
- B. Installer Qualifications:
 1. Engage an experienced installer who has completed tile installations similar in material, design, and extent to that indicated for this project and with a record of successful in-service performance. Installer to have a minimum of five years' experience.
 2. Five-Star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile Contractors' Association of America.
 3. Installer's supervisor for the project must hold the International Masonry Institute's Foreman Certification.
 4. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.
- C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1.06 PRE-INSTALLATION CONFERENCE

- A. Convene one week prior to commencing work of this section.
- B. Require attendance of installation material manufacturer, tile supplier, tile installer and installers of related work. Review installation procedures and coordination required with related work.
- C. Meeting agenda includes but is not limited to:
 - 1. Tile and installation material compatibility.
 - 2. Grouting procedure.
 - 3. Maintenance and cleaning products and methods.
 - 4. Surface preparation.

1.07 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 and other causes.
- B. Protect setting materials from freezing and overheating in accordance with manufacturer's instructions.
- C. Store tile and setting materials on elevated platforms, under cover and in a dry location and protect from contamination, dampness, freezing and overheating.
- D. Do not use frozen materials unless specifically allowed by manufacturer.
- E. Deliver and store materials on site at least 24 hours before work begins.
- F. Provide heated and dry storage facilities on site.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.
- B. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- C. For interior applications:
 - 1. Do not begin installation until building is completely enclosed and maintains temperature and humidity conditions consistent with "after occupancy" conditions for a minimum of 2 weeks.
 - 2. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
 - 3. Vent temporary heaters to exterior to prevent damage to tilework from carbon dioxide build-up.
 - 4. Maintain temperatures at not less than 50°F (10°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

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: MAPEI Corporation, 1144 E. Newport Center Drive, Deerfield Beach, FL 33442, USA; Toll-Free Tel: 1-800-992-6273; Fax: 954-246-8805; Email: TechServiceRequests@mapei.com; Web: www.mapei.us.

- B. Acceptable Manufacturer: MAPEI Inc., 2900 Francis-Hughes, Laval, QC, H7L 3J5, Canada; Toll-Free Tel: 1-800-361-9309; Fax: 450-901-0196; Email: TServicesCA@mapei.com; Web: www.mapei.ca.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 – Product Requirements.
- D. Substitutions: Not permitted.

2.02 SURFACE PREPARATION MATERIALS

- A. Trowelable Floor/Wall Patch and Render Mortar: Quick-setting, polymer-modified, fiber-reinforced, cementitious rendering, patching, and leveling mortar, can be applied at 1/8 inch to 1-1/4 inch (3 mm to 3.2 cm).
 - 1. Product: MAPEI, Planitop 330 Fast.

2.03 WATERPROOF/CRACK ISOLATION MEMBRANES

- A. General: Manufacturer's standard product that complies with ANSI A118.10, ANSI A118.12, and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
 - 1. Product: Products from MAPEI.
- B. Fluid-Applied Membrane: Advanced liquid-rubber; extremely quick-drying, premium waterproofing and crack-isolation membrane, IAPMO-listed, ANSI A118.10 and ANSI A118.12.
 - 1. Product: MAPEI, Mapelastc AquaDefense.
 - a. With MAPEI, Reinforcing Fabric.
- C. Cementitious-Binder-Based Membrane: Rapid-drying, two-component, waterproofing and crack-isolation membrane, suitable for steam showers, IAPMO-listed, ANSI A118.10 and ANSI A118.12.
 - 1. Product: MAPEI, Mapelastc Turbo.
 - a. With MAPEI, Reinforcing Fabric.
- D. Trowelable Latex-Portland Cement: Flexible mortar consisting of cement-based mix and latex additive, waterproofing and crack-isolation membrane, ANSI A118.10 and ANSI A118.12.
 - 1. Product: MAPEI, Mapelastc 315.
 - a. With MAPEI, Fiberglass Mesh
- E. Fluid-Applied Membrane: Fast-drying, liquid-rubber waterproofing and crack-isolation membrane, IAPMO-listed, ANSI A118.10 and ANSI A118.12.
 - 1. Product: Subject to compliance with requirements, provide MAPEI, Mapelastc WaterStop.
 - a. With MAPEI, Reinforcing Fabric.

2.04 SETTING MATERIALS

- F. 100%-Solids, Water-Cleanable, Epoxy Bond Coat: ANSI A118.3 and ISO 13007 R2T.
 - 1. Product: MAPEI, Kerapoxy SB.
 - 2. Provide product with a VOC content of 65 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 3. Product shall comply with the testing and product requirements of the California Department of Health Services "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
 - 4. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140°F (60°C) and 212°F (100°C), respectively, and certified by manufacturer for intended use.

2.05 FLEXIBLE SEALANT

- A. 100%-Silicone Sealant: Heavy-traffic expansion and movement joints, horizontal and vertical complying with ASTM standards; ASTM – Meets C920, Type S, Grade NS, Class 25, Use T1, T2, NT, I, M, G, A and O, and conforms to C794 adhesion properties, (#23 Clear color meets ASTM C920, Type S, Grade NS, Class 50, Use NT).
 - 1. Product: MAPEI, Mapesil T.

2.06 GROUT RELEASE

- A. Grout Release: High-performance sacrificial coating that protects the tile surface from grout stains, improves cleanability and reduces the risk of grout haze or film residue, interior and exterior applications on all-natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), porcelain/ceramic tiles, masonry and quarry tiles.
 - 1. Product: MAPEI, UltraCare Grout Release.

2.07 PENETRATING STONE, TILE AND GROUT SEALERS

- A. Solvent-Based Penetrating Sealer: Natural-look, providing maximum protection against most common stains. For use on interior and exterior natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), unglazed porcelain and ceramic tiles, masonry, quarry tiles and cement grout. Can also be used as a pre-grouting sealer.
 - 1. Product: MAPEI, UltraCare Penetrating SB Stone, Tile & Grout Sealer.
- B. Water-Based Penetrating Sealer: Premium, natural-look, providing 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.
 - 1. Product: MAPEI, UltraCare Penetrating Plus Stone, Tile & Grout Sealer.

2.08 STONE, TILE AND GROUT MAINTENANCE, CLEANERS AND GROUT HAZE REMOVERS

- A. Neutral pH Cleaner: Highly concentrated, zero-VOC, for ceramic, porcelain and natural stone surfaces. Helps prevent soap scum buildup and hard water deposits.
 - 1. Product: MAPEI, UltraCare Concentrated Tile & Grout Cleaner.
- B. High-Alkaline Cleaner: Highly concentrated and degreaser that quickly removes waxes, grease, oil, light soap scum, mildew and algae stains. For areas that have been neglected or subject to heavy use.
 - 1. Product: MAPEI, UltraCare Heavy-Duty Stone, Tile & Grout Cleaner.
- C. Epoxy Grout Haze Remover: Professional-strength water-based formulation that helps remove epoxy grout haze from tile and natural stone surfaces, natural citrus scent, non-flammable and easy to use.
 - 1. Product: MAPEI, UltraCare Epoxy Grout Haze Remover.

2.09 MIXES

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates for compliance with requirements for conditions affecting performance of the work. Refer to ANSI A108.01, ANSI A108.02 and if applicable ANSI A108.19.
- B. Do not proceed with tilework until surfaces and conditions comply with requirements indicated in reference tile installation standard and manufacturer's printed instructions.

- C. When underlayment, patching, leveling and rendering materials are needed, they must be from the setting materials supplier. For improved warranty and single-source responsibility.

3.02 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. Apply waterproof membrane only in dry weather, when ambient and substrate temperatures are above 40°F (4°C).
- C. Waterproofing: Install necessary components to form a watertight installation. Dry film thickness (DFT) must comply with manufacturers' recommendations.
- D. Install tile in accordance with TCNA methods specified on the drawings.
- E. Install tile in accordance with TCNA methods listed below.
 - 1. Wall Tile at ____: TCNA method W244C STONE.
- F. Expansion and Control Joints: TCNA method EJ171.
- G. Apply tile and grout cleaners, sealers and maintenance products in accordance with manufacturer's printed instructions and technical data sheets.

3.03 GROUTING

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

3.04 PROTECTION

- A. Walls: Protect from impact, vibration and heavy hammering on adjacent and opposite walls for 14 days after installation, unless manufacturer's instructions allow a shorter period.
- B. Protect from freezing and total water immersion for at least 21 days after installation.

END OF SECTION