



# Mosaic & Glass Tile Mortar

**Polymer-Enriched  
Thin-Set Mortar**



## DESCRIPTION

*Mosaic & Glass Tile Mortar* is a regular-setting, polymer-enriched (“modified”), bright white, multipurpose mortar designed for installing sheet-mounted mosaic glass or stone tiles or individual tiles in thin-set applications.

## FEATURES AND BENEFITS

- Non-sag performance: Great for sheet-mounted mosaics where final alignment is critical
- Bright white color enhances the appearance of transparent or translucent glass or stone tile.
- Can be mixed with MAPEI’s *Polymer Additive* (instead of water) for increased performance and installation of tile in submerged applications

## INDUSTRY STANDARDS AND APPROVALS

When mixed with water

- Exceeds ANSI A118.4TE and ANSI A137.2 requirements

When mixed with *Polymer Additive*

- Exceeds ANSI A118.4TE and ANSI A118.11 requirements

## SUITABLE TILE OR STONE

- Sheet-mounted mosaics (glass, ceramic, porcelain or stone)
- Ceramic and porcelain tile
- Glass tile; follow manufacturer’s recommendations for suitability and application requirements

- Quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone – all up to 15” x 15” (38 x 38 cm)

## SUITABLE SUBSTRATES

When mixed with water

- Concrete (cured at least 28 days)
- Masonry cement block, brick, cement mortar beds and leveling coats
- Cement backer units (CBUs) (see manufacturer’s installation guidelines)
- Gypsum wallboard and plaster – interior walls in dry areas only (priming may be required). See the “Surface preparation requirements” reference guide in the Related Documents section of the Tile & Stone Installation Systems page on MAPEI’s Website.

When mixed with *Polymer Additive*

- All the substrates above
- APA Group 1 and CANPLY 0121 exterior-grade plywood (interior, residential and light-commercial floor and countertops in dry conditions only)
- Existing ceramic and porcelain tile, cement terrazzo, quarry tile and pavers (interior and dry conditions only)
- MAPEI waterproofing, crack-isolation and sound-reduction membranes

Note: Glass tile may not be suitable over some of the above substrates (such as plywood). Consult the recommendations of the TCNA and the glass tile manufacturer regarding glass tile installations over these substrates or membranes.

Contact MAPEI’s Technical Services Department for installation recommendations regarding substrates and conditions not listed.



## WHERE TO USE

### When mixed with water

- Most interior/exterior residential installations on floors and walls
- Most interior/exterior commercial installations on floors
- Most interior commercial installations on walls

### When mixed with undiluted *Polymer Additive*

- All the uses listed above
- Installations subject to water immersion, such as pools and spas
- Most exterior commercial installations on walls

## LIMITATIONS

- Install at temperatures between 40°F and 95°F (4°C and 35°C).
- Do not use for moisture-sensitive stone (green marble; some limestone and granite), agglomerate tiles or resin-backed tiles. Instead, use suitable epoxy or urethane adhesives. See respective Technical Data Sheets for more information.
- Do not use over dimensionally unstable substrates such as hardwood flooring, oriented strand board (OSB), substrates containing asbestos, or metal. See the Suitable Substrates section above.
- To use directly over gypsum-based patching or leveling substrates, apply a suitable sealer/primer before use. See the "Tiling over gypsum" technical bulletin in the Related Documents section of the Tile & Stone Installation Systems page on MAPEI's Website.
- Installations of tile over nonporous surfaces, such as waterproofing membranes and existing tile, may require extended setting/curing times.
- Do not use for glass tile with a decorative coating on the tile backing.
- For setting large-format glass tile, see the "Installing large-format, opaque glass tiles" technical bulletin in the Related Documents section of the Tile & Stone Installation Systems page on MAPEI's Website.
- When mixed with water, do not use for installations subject to water immersion, such as pools and spas.
- Not recommended for areas subject to severe freeze/thaw conditions when mixed with water. For best performance, mix *Mosaic & Glass Tile Mortar* with undiluted *Polymer Additive* for installations subject to severe freeze/thaw conditions.
- Consult building code requirements for use on exterior commercial facades.

## SURFACE PREPARATION

- All substrates should be structurally sound, stable, dry, clean and free of any substance or condition that may reduce or prevent proper adhesion.

- See the "Surface preparation requirements" reference guide in the Related Documents section of the Tile & Stone Installation Systems page on MAPEI's Website.

## MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

1. Into a clean mixing container, pour about 1.5 to 1.7 U.S. qts. (1.42 to 1.61 L) of clean water (or *Polymer Additive*).
2. Gradually add 10 lbs. (4.54 kg) of powder while slowly mixing.
3. Use a low-speed mixing drill (at about 300 rpm) with an angled cross-blade mixer or auger mixer. Mix thoroughly until mixture becomes a smooth, lump-free paste. Avoid prolonged mixing.
4. Let the mixture stand for 5 minutes.
5. Remix for 1 minute.
6. If mixture becomes heavy or stiff, remix without adding more liquid.

## PRODUCT APPLICATION

1. Consult the glass tile manufacturer's specifications to verify product suitability for specific installations and installation procedures.
2. Choose a typical notched trowel (see the "Approximate Coverage" chart) with sufficient depth to achieve greater than 80% mortar contact to both the tile and substrate for all interior applications, and greater than 95% for exterior installations, commercial floor and wet applications. It may be necessary to back-butter tile in order to meet these requirements. Glass-tile installations require 100% continuous coverage. (Refer to ANSI A108.5 specifications and TCNA Handbook guidelines.)
3. With pressure, apply a coat by using the trowel's flat side to key mortar into the substrate.
4. Apply additional mortar, combing it in a single direction with the trowel's notched side. For glass tile and mosaics, knock down the trowel ridges to ensure that they do not show through translucent tiles.
5. Spread only as much mortar as can be tiled before the product skins over. Open time can vary with jobsite conditions.
6. Place the tiles firmly into the wet mortar. Push the tiles back and forth in a direction perpendicular to trowel lines to collapse the mortar ridges and to help achieve maximum coverage. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage.
7. Follow immediately with a proper beating-in of the tile to flatten ridges or notches. For the installation of sheet-mounted glass and marble mosaics, after using light pressure to establish contact with the fresh mortar,

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**ANSI Specifications** when mixed with water

Test Method	ANSI Specification	Test Results
ANSI A118.4E – extended open time	≥ 72.5 psi (0.5 MPa) at 30 minutes	Pass
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1.38 MPa) at 28 days	200 to 280 psi (1.38 to 1.93 MPa)
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2.07 MPa) at 28 days	425 to 640 psi (2.93 to 4.41 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	255 to 425 psi (1.76 to 2.93 MPa)
ANSI A118.4T – sag on vertical surfaces	< 0.02" (0.5 mm) at 20 minutes	Pass

**ANSI Specifications** when mixed with *Polymer Additive*




Test Method	ANSI Specification	Test Results
ANSI A118.4E – extended open time	≥ 72.5 psi (0.5 MPa) at 30 minutes	Pass
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1.38 MPa) at 28 days	200 to 400 psi (1.38 to 2.76 MPa)
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2.07 MPa) at 28 days	490 to 780 psi (3.38 to 5.38 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	420 to 640 psi (2.90 to 4.41 MPa)
ANSI A118.4T – sag on vertical surfaces	< 0.02" (0.5 mm) at 20 minutes	Pass
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1.03 MPa) at 28 days	150 to 250 psi (1.03 to 1.72 MPa)

**Shelf Life and Application Properties** at 73°F (23°C) and 50% relative humidity

Shelf life	1 year when stored in original, unopened packaging
Open time*	20 to 30 minutes
Pot life*	> 2 hours
Time before grouting	24 to 48 hours
VOCs (Rule #1168 of California's SCAQMD)	0 g per L

\* *Open time and pot life vary based on jobsite conditions.*

**Approximate Coverage\*\*** per 10 lbs. (4.54 kg)

Typical Trowel	Coverage
1/8" x 3/16" x 1/8" (3 x 4.5 x 3 mm) 	18 to 24 sq. ft. (1.67 to 2.23 m <sup>2</sup> )
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) 	16 to 20 sq. ft. (1.49 to 1.86 m <sup>2</sup> )
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm) 	11 to 14 sq. ft. (1.02 to 1.30 m <sup>2</sup> )

\*\* *Trowel dimensions are width/depth/space. Actual coverage will vary according to substrate profile and tile type.*

# Mosaic & Glass Tile Mortar



## Packaging

### Size and Color

10 lbs. (4.54 kg), bright white

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lightly tap the tile with a rubber-faced beating block and mallet.

- Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting (see ANSI A108.10 guidelines). Remove all mortar from the glass tile surface.

## EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints as specified per TCNA Method EJ171 or TTMAC Specification Guide 09 30 00 Detail 301MJ. Do not cover expansion joints with mortar.
- Glass tiles exhibit more dimensional change due to temperature fluctuations than do ceramic or porcelain tiles. Joint spacing recommendations in EJ171 (301MJ) give a range for interior and exterior applications. For glass-tile installations, add additional movement joints in order to reduce stresses.

## CLEANUP

- Use only water to clean tools and tile while the mortar is fresh.

## PROTECTION

- Protect from foot traffic for 24 hours before grouting.
- Protect from heavy traffic, frost and rain for 7 days.
- All glass installations benefit from extended cure times before grouting or permitting foot traffic.
- Glass tile requires at least 21 days of curing time after grouting before water submersion.

## RELATED DOCUMENTS

Reference guide: "Surface preparation requirements" for tile and stone installation systems\*

Technical bulletin: "Tiling over gypsum"\*

\* At [www.mapei.com](http://www.mapei.com)

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI meets the health and well-being requirements of product certification programs, contact the MAPEI Sustainability Team at 1-800-992-6273.

## LEGAL NOTICE

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