



# Ultraflex™ 2

## Professional Tile Mortar with Polymer



### DESCRIPTION

Ultraflex 2 is a professional-grade, single-component, high-performance, polymer-modified thin-set mortar for interior and exterior installations of ceramic, porcelain and dimensional natural-stone tile. This mortar has a high content of unique dry polymer, resulting in excellent adhesion to the substrate and tile. Ultraflex 2 meets or exceeds ANSI A118.4 and ANSI A118.11 requirements when mixed with water. Ultraflex 2 can be used for interior and exterior installations of tile in most residential floor and wall applications. In commercial applications, use on interior floor and wall installations and exterior floors.

### FEATURES AND BENEFITS

- Polymer-enriched for high performance and deformability
- Smooth and creamy consistency for easy application

### INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification C2EP1
- ANSI: Exceeds ANSI A118.4 and ANSI A118.11 bond strength requirements

<u>LEED Points Contribution</u>	<u>LEED Points</u>
MR Credit 5, Regional Materials*	Up to 2 points
IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants	1 point

IEQ Credit 4.3, Low-Emitting

Materials – Flooring Systems .....1 point

\* Using this product may help contribute to LEED certification of projects in the categories shown above. Points are awarded based on contributions of all project materials.

### WHERE TO USE

- Most interior/exterior residential installations on floors and walls
- Most interior/exterior commercial installations on floors
- Most interior commercial installations on walls
- Installation of ceramic and porcelain tile, quarry tile, pavers, Saltillo tile, and many types of marble, granite and natural stone

### LIMITATIONS

- Install only at temperatures between 40°F and 95°F (4°C and 35°C).
- Do not use for moisture-sensitive stone (green marble, some limestones and granites), agglomerate tiles or resin-backed tiles. Instead, use a suitable epoxy or urethane adhesive. See the respective Technical Data Sheet 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.
- To use directly over gypsum-based patching or leveling substrates, apply suitable primer before use. See MAPEI Technical Bulletin 010313-TB, "Gypsum-Based Floors and Walls: Which MAPEI Products Can Be Applied?"



- Use a white mortar when installing light-colored stones and translucent marble.
  - Installations of tile over nonporous surfaces (waterproofing membranes, sheet membranes, existing tile, etc.) may require extended setting/curing times.
  - Do not use for installations subject to prolonged water immersion.
  - Use a MAPEI liquid latex additive mortar system for areas subject to severe freeze/thaw conditions.
2. Use a low-speed mixing drill (at about 300 rpm), with an angled cross-blade mixer or double-box mixer. Mix thoroughly until the mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
  3. Let the mixture stand ("slake") for 10 minutes.
  4. Remix.
  5. If the mixture becomes heavy or stiff, remix without adding more liquid or powder.

## SUITABLE SUBSTRATES

- 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 – interior walls in dry areas only (See Technical Bulletin 010313-TB for priming instructions)
- APA and CANPLY Group 1 exterior-grade plywood (interior, residential and light commercial in dry conditions only)
- Properly prepared vinyl composition tile (VCT) and cutback residue (interior only)
- Properly prepared existing ceramic and porcelain tile, quarry tile and pavers (interior only)
- MAPEI waterproofing, crack-isolation and sound-reduction membranes

## 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 MAPEI's "Surface Preparation Requirements" document in the Product Information section of the Tile & Stone Installation Systems page on MAPEI's Website.

## MIXING

Before starting, take appropriate safety precautions. See the (Material) Safety Data Sheet for details.

For 10-lb. (4,54-kg) size:

- 1a. Into a clean mixing container, pour about 1 to 1.2 U.S. qts. (0,95 to 1,14 L) of clean potable water. Gradually add 10 lbs. (4,54 kg) of powder while slowly mixing.

For 25-lb. (11,3-kg) size:

- 1b. Into a clean mixing container, pour about 2.5 to 3 U.S. qts. (2,37 to 2,84 L) of clean potable water. Gradually add 25 lbs. (11,3 kg) of powder while slowly mixing.

For 50-lb. (22,7-kg) size:

- 1c. Into a clean mixing container, pour about 5 to 6 U.S. qts. (4,73 to 5,68 L) of clean potable water. Gradually add 50 lbs. (22,7 kg) of powder while slowly mixing.

## PRODUCT APPLICATION

1. Choose a typical notched trowel (see "Approximate Coverage" chart) with sufficient depth to achieve more than 80% mortar contact to both the tile and substrate for all interior applications, and more than 95% for exterior installations, commercial floor and wet applications. It may be necessary to back-butter the tile in order to meet these requirements. (Refer to ANSI A108.5 specifications and TCNA Handbook guidelines.)
2. With pressure, apply a coat by using the trowel's flat side to key mortar into the substrate.
3. Apply additional mortar, combing it in a single direction with the trowel's notched side.
4. Spread only as much mortar as can be tiled before product skins over. Open time can vary with jobsite conditions.
5. 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.
6. 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).

## EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints as specified per TCNA Detail EJ171 or TTMAC Specification Guide 09 30 00 Detail 301EJ. Do not cover any expansion joints with mortar.

## CLEANUP

- Clean tools and tile while the mortar is fresh.

## PROTECTION

- Protect from traffic for 24 hours. Protect from heavy traffic for 7 days.
- Protect from frost and rain for 7 days.

## ISO 13007 Classification

Classification Code	Classification Requirement
C2 (cementitious, improved adhesion)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
E (extended open time)	≥ 72.5 psi (0,5 MPa) after 30 minutes
P1 (normal adhesion to plywood)	≥ 72.5 psi (0,5 MPa)

## ANSI Specification

Test Method	Specification Standard	Test Results
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1,38 MPa) at 28 days	330 to 425 psi (2,28 to 2,93 MPa)
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2,07 MPa) at 28 days	400 to 600 psi (2,76 to 4,14 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1,03 MPa) at 28 days	350 to 475 psi (2,41 to 3,28 MPa)
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1,03 MPa) at 28 days	150 to 200 psi (1,03 to 1,38 MPa)

## Shelf Life and Application Properties

at 73°F (23°C) and 50% relative humidity



Shelf life	1 year
Open time*	30 minutes
Pot life*	> 2 hours
Time before grouting*	16 to 24 hours
VOCs (Rule #1168 of California's SCAQMD)	0 g per L

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

## Packaging

Product Code	Size and Color
0060053	Bag: 10 lbs. (4,54 kg), gray
0060054	Bag: 25 lbs. (11,3 kg), gray
0060056	Bag: 25 lbs. (11,3 kg), white
0060055	Bag: 50 lbs. (22,7 kg), gray
0060057	Bag: 50 lbs. (22,7 kg), white

## Approximate Coverage\*

Typical Trowel	Coverage for 50 lbs. (22,7 kg)
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) 	75 to 90 sq. ft. (6,97 to 8,36 m²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm) 	55 to 65 sq. ft. (5,11 to 6,04 m²)
Typical Trowel	Coverage for 25 lbs. (11,3 kg)
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)	38 to 45 sq. ft. (3,53 to 4,18 m²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)	28 to 33 sq. ft. (2,60 to 3,07 m²)
Typical Trowel	Coverage for 10 lbs. (4,54 kg)
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)	15 to 18 sq. ft. (1,39 to 1,67 m²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)	11 to 13 sq. ft. (1,02 to 1,21 m²)

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

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Refer to MAPEI's (M)SDS for specific data related to VOCs, health and safety, and handling of product.

## STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith.

**ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



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For the most current BEST-BACKED™ product data and warranty information, visit [www.mapei.com](http://www.mapei.com).

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