MAPEI®

Ultralite Mortar™

Lightweight, polymer-modified wall and floor mortar

BioBlock™ ANTIMICROBIAL PROTECTION

C2TE IN COMPLIANCE WITH ISO STANDARDS • ISO 13007 • CEMENTITIOUS ADHESIVE

S1 IN COMPLIANCE WITH ISO STANDARDS • ISO 13007 • HIGHLY DEFORMABLE ADHESIVE

P1 IN COMPLIANCE WITH ISO STANDARDS • ISO 13007 • ADHESIVE OVER PLYWOOD

Meets or exceeds ANSI A118.4 and ANSI A118.11 industry standards

Universal Color Formula™

Ultralite Technology™

GREEN INNOVATION™

DESCRIPTION

Ultralite Mortar is a lightweight, premium-grade, multipurpose thin-set mortar that also can be used for medium-bed and nonsag applications. It is formulated with Easy Glide Technology™ for ease of application and BioBlock™ technology for antimicrobial protection. *Ultralite Mortar* provides twice the coverage of a standard thin-set mortar. A Universal Color Formula™ product, *Ultralite Mortar* is approved for use with natural stone and light-colored grouts.

USES

- Interior residential and commercial installations of tile on floors, walls and countertops in dry and wet areas
- Exterior residential and commercial installations of tile on floors, walls and countertops in dry and wet areas (see wall specifications under "Technical Notes")
- Installations of ceramic and porcelain tile and mosaics, quarry tile, pavers, Saltillo tile, and most types of marble, granite and natural stone
- Replacement for mastic when installing tile in showers, bathrooms, backsplashes and areas where mastics are commonly used
- Installations of light-colored natural stone or translucent marble
- Installations of cement boards in accordance with the manufacturer's instructions
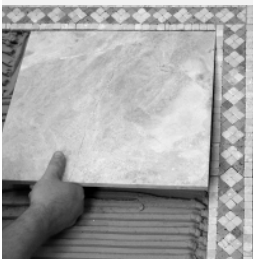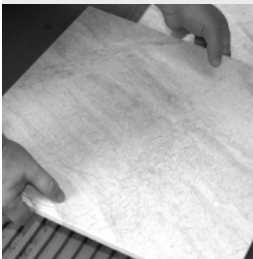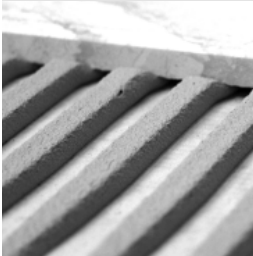
RECOMMENDED SUBSTRATES

- Fully cured concrete (at least 28 days)
- Masonry walls of cement block or brick
- Cement mortar beds and leveling coats
- Cement backer units – see manufacturer's installation guidelines
- Gypsum wallboard – interior dry walls only (to improve adhesion, prime with *Planicrete® AC*)
- APA and COFI Group 1 exterior-grade plywood (interior, residential and light commercial floors and countertops in dry areas)
- Properly prepared, well-bonded unglazed tile and cement terrazzo, VCT, VAT and cutback residue (interior installations)
- Properly prepared existing ceramic and porcelain tile, quarry tile and pavers
- MAPEI's waterproofing and crack-isolation membranes over recommended substrates for those membranes

Note: Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

TECHNICAL NOTES

- Universal Color Formula is approved for installations of light-colored natural stone and translucent marble. It is also approved for installations where a white or light-colored grout has been selected.

- Installations of large-format tile over nonporous surfaces, such as waterproofing membranes and existing tile, may require extended setting times.

- When highly absorptive tile such as Saltillo tile is installed, the back of each tile should be thoroughly saturated with a wet sponge before being set into the mortar.

- Installations of ceramic and porcelain tile require a substrate deflection rating of at least L/360. Stone-industry standards require a substrate deflection rating of at least L/720 and a 1-1/2" (3,8 cm) double layer of plywood over wood-frame construction. For other wood-frame construction recommendations, consult the Marble Institute of America (MIA).

- Use of *Ultralite Mortar* on exterior commercial building facades – such as shopping malls, office buildings and high-rise residential units – is limited to two-story applications. For other exterior-wall applications, use MAPEI's *Kerabond*/*Keralastic*™ or *Granirapid*® system. Consult MAPEI's Technical Services Department regarding these applications.

- Do not apply directly over gypsum-based patching or leveling compounds, sheet vinyl, existing natural stone, self-stick tile, laminate surfaces, fiberglass surfaces, metal or poured epoxy floors.

- Do not use over hardwood flooring, presswood, particleboard, chipboard, oriented strand board (OSB), Masonite, Lauan plywood, pressure-treated or oil-treated plywood, metal or similar dimensionally unstable materials.

- Do not use as a thick-bed mortar, concrete repair mortar, concrete patching material or skim-coating compound, or to level subfloors.

- Do not install at temperatures below 50°F (10°C) or above 100°F (38°C).

- The Uniform Building Code requires mechanical fasteners for individual tiles larger than 720 sq. in. (0,46 m²) or weighing more than 15 lbs. (6,80 kg) per square foot (0,09 m²).

- Do not use for moisture-sensitive stone (green marble, limestone and some granites), agglomerate tiles, cultured marble or resin-backed tiles. Instead, use *Kerapoxy*®, *Kerapoxy 410*, *Planicrete*® *W*, or rapid-set or epoxy adhesives.

- Do not use to install glass tiles. Instead, use MAPEI's *Kerabond*/*Keralastic* or *Granirapid* system in white only.

- Do not use for installations subject to continuous water immersion or extreme moisture, such as swimming pools, spas, steam rooms, hot tubs, steam showers and fountains. Instead, use MAPEI's *Kerabond*/*Keralastic* or *Granirapid* system (see respective Technical Data Sheets for details).

- MAPEI recommends priming gypsum wallboard with *Planicrete AC* before applying mortar, as doing so dramatically enhances the adhesion between the tile, mortar and wallboard. Gypsum wallboard may be waterproofed with *Mapelastic*™ *315*, which also enhances the performance dramatically.

INSTRUCTIONS

1. Surface Preparation

1.1 All substrates should be structurally sound, well-fastened, dry, clean and free of dust, oil, grease, paint, wax, curing agents, sealers, adhesive residue and any substance or condition that may reduce or prevent adhesion.

1.2 See MAPEI's "Surface Preparation Requirements" document for details.

2. Mixing

To achieve the stated coverage and nonsag performance for *Ultralite Mortar*, use the recommended water/mix ratios (see "Mixing Ratios and Approximate Coverages" chart).

2.1 **For thin-set applications**

2.1.1 In a clean mixing container, pour about 6.75 U.S. qts. (6,39 L) of cool, clean potable water. Gradually add one 25-lb. (11,3-kg) bag of *Ultralite Mortar* powder while slowly mixing.

2.1.2 Use a low-speed mixing drill (at about 300 rpm), with an angled cross blade mixer or double box mixer. Mix thoroughly until mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.

2.1.3 Let mixture stand ("slake") for 5 to 10 minutes.

2.1.4 If mixture becomes heavy or stiff, remix without adding more liquid or powder.

2.2 **For medium-bed and wall installations**

2.2.1 In a clean mixing container, pour about 6 U.S. qts. (5,68 L) of cool, clean potable water. Gradually add one 25-lb. (11,3-kg) bag of *Ultralite Mortar* powder while slowly mixing.

2.2.2 Use a low-speed mixing drill (at about 300 rpm), with an angled cross blade mixer or double box mixer. Mix thoroughly until mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.

2.2.3 Let mixture stand ("slake") for 5 to 10 minutes.

2.2.4 If the mixture becomes heavy or stiff, remix without adding any more liquid or dry powder.

TECHNICAL DATA (based on 73°F [23°C] and 50% relative humidity)

Dry solid content..100%
Rating ....Extra heavy-duty
Shelf life...12 months in a dry place in original, unopened packaging
Colors...Universal Color Formula™
Application temperature range ....50°F (10°C) to 100°F (38°C)

Ultralite Mortar **(mixed)**

Pot life ....3 to 4 hours
Open time† ....25 to 35 minutes
Mixing ratio ....See Section 2, "Mixing"
Consistency ....Paste
pH ....About 13
Health and safety..Consult the Material Safety Data Sheet (MSDS) for
safe-handling instructions.

† *Open times vary based on temperature, humidity, substrate, trowel size and job-site conditions.*

PACKAGING
Bag: 25 lbs. (11,3 kg)

MIXING RATIOS AND APPROXIMATE COVERAGES* (per 25 lbs. [11,3 kg] of *Ultralite Mortar*)
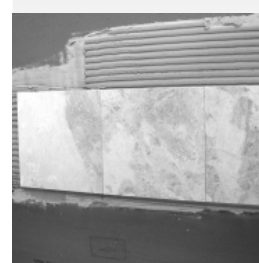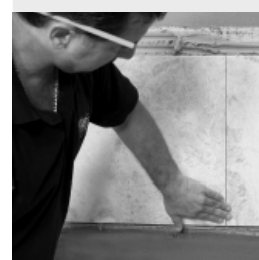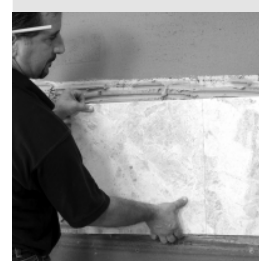
INSTALLATION	WATER TO ADD	TILE SIZE	TROWEL		COVERAGE*
Wall – Nonsag	6 U.S. qts. (5,68 L)	Ceramic mosaics, wall tile and modular tile – 8" x 8" (20 x 20 cm) up to 16" x 16" (41 x 41 cm)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)		80 - 95 sq. ft. (7,43 - 8,83 m²)
			1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)		60 - 70 sq. ft. (5,57 - 6,50 m²)
Thin-Set	6.75 U.S. qts. (6,39 L)	1" x 1" (2,5 x 2,5 cm) up to 8" x 8" (20 x 20 cm)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)		100 - 110 sq. ft. (9,29 - 10,2 m²)
		Large modular tiles – 8" x 8" (20 x 20 cm) up to 16" x 16" (41 x 41 cm)	1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)		65 - 75 sq. ft. (6,04 - 6,97 m²)
Medium-Bed	6 U.S. qts. (5,68 L)	Large modular tiles – 12" x 12" (30 x 30 cm) up to 24" x 24" (61 x 61 cm)	1/2" x 1/2" x 1/2" (12 x 12 x 12 mm)		42 - 47 sq. ft. (3,90 - 4,37 m²)
			3/4" x 9/16" x 3/8" (19 x 14 x 10 mm)		35 - 40 sq. ft. (3,25 - 3,72 m²)

* *Trowel dimensions are width/depth/space. Coverages shown are approximate and given for estimating purposes only. Actual job-site coverages may vary according to substrate conditions, type of equipment used, thickness applied, handling and application procedures. To obtain stated coverage and nonsag performance, use recommended water/mix ratios.*

3. Application

3.1 Select a notched trowel (see "Technical Data" section) with enough depth for a continuous mortar thickness of 1/8" (3 mm) to 3/4" (19 mm) between the tile and the substrate. Mortar contact should be at least 85% for all interior residential applications, 95% for commercial and exterior applications, and 100% for natural-stone applications.

3.2 For best results, create a pressure-applied coat by using the trowel's flat side to key mortar into substrate.

3.3 Immediately add more mortar, combing it in a single direction with the trowel's notched side. Troweling in a "swirl" pattern is not recommended.

3.4 Spread only as much mortar as can be tiled within 25 to 30 minutes – about 20 sq. ft. (1,86 m²) – or while mortar is still tacky. Open time will vary with job-site conditions.

3.5 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 achieve maximum coverage. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage.

3.6 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).

4. Expansion and Control Joints

4.1 Provide for expansion and control joints as specified per TCA Detail EJ171 or TTMAC Specification Guide 09300 Detail 301EJ.

4.2 Do not cover expansion or control joints with tile or stone.

4.3 Do not cover, bridge or fill any expansion or control joints with *Ultralite Mortar*.

4.4 Insert the specified compressible bead and sealant for expansion and control joints, according to plans and specifications.

5. Cleaning

5.1 Remove any excess mortar from the tile surface while the mortar is fresh. Use a damp sponge with clean, cool water. A light-duty Scotchbrite® scrub pad also may be used if needed.

5.2 Tools should be cleaned as well while the mortar is fresh. Use a damp sponge or a stiff nylon brush with cool water.

6. Protection

6.1 Protect the finished installation from light traffic and impact for at least 24 to 48 hours, and from heavy traffic for at least 7 days.

6.2 Protect from rain for at least 72 hours.

6.3 Protect from freezing for at least 5 to 7 days.

7. Grouting

Before grouting, allow 24 to 48 hours for tiles to reach a firm set at room temperature (73°F [23°C]). Setting time may be extended by cold temperatures or high humidity.