Light Mortar for Tile & Stone

Lightweight, Polymer-Enriched Mortar for Floors and Walls

DESCRIPTION

Light Mortar for Tile & Stone is a premium-grade, lightweight, single-component thin-set mortar that can also be used for large-and-heavy-tile and nonsag applications. This high-performance, polymer-modified mortar is formulated with Easy Glide Technology™ for ease of application, and with BioBlock® technology for mold and mildew resistance. *Light Mortar for Tile & Stone*'s unique Ultralite Technology™ provides twice the coverage of a standard thin-set mortar per pound/kg and may contribute to LEED points with more than 20% recycled content. This product features a very low emission of volatile organic compounds and includes an offset of greenhouse gas emissions.

CO_2 FULLY OFFSET PRODUCTS

Light Mortar for Tile & Stone is part of the "CO_2 Fully Offset in the Entire Life Cycle" line of products. CO_2 emissions measured throughout the life cycle of products from the ZERO line in 2024, using Life Cycle Assessment (LCA) methodology, verified and certified with EPDs, have been offset through the acquisition of third-party-certified carbon credits in support of forestry protection projects: A commitment to the planet, to people and to biodiversity. For more details on how emissions are calculated and on climate-mitigation projects that are financed through certified carbon credits, visit the Webpage www.mapei.com/ca/en-ca/sustainable-products.

FEATURES AND BENEFITS

- Polymer-enriched for high performance and deformability
- Nonsag and medium-bed formula for large-format tile and stone

- 25-lb. (11.3-kg) bag provides the same coverage as a 50-lb. (22.7-kg) bag of a standard polymer-modified mortar
- Designed with Universal Color Formula™ for installations with light-colored stones and translucent marble
- Smooth and creamy consistency
- No silica added - Products with “no silica added” do not contain intentionally added crystalline silica. Trace amounts exist in cement and other ingredients, which will be listed on product Safety Data Sheets (SDSs). Please note that respirable crystalline silica can also be emitted by ingredients such as Portland cement

INDUSTRY STANDARDS AND APPROVALS

- ANSI: Exceeds A118.4HET, A118.11 and A118.15HET requirements

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 most 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 suitable epoxy or urethane adhesives. 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 a suitable primer/sealer before use. See the technical bulletin “Tiling over gypsum” in the Tile & Stone Installation Systems section of 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 installations subject to prolonged water immersion.
- Not recommended for areas subject to severe freeze/thaw conditions. For the best performance, use a MAPEI mortar system with a liquid latex additive.

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 (priming may be required). See the “Surface preparation requirements” reference guide in the Tile & Stone Installation Systems section of MAPEI’s Website.
- Plywood underlayments must be a Group 1 exterior-grade plywood CC-plugged or better, conforming to APA classification and U.S. Product Standard PS 1-95 or a “SELECT” or (SEL-TF) CANPLY classified exterior-grade

plywood conforming to CSA-0121 standard for Douglas fir for direct-bond (interior, residential and light commercial floors and countertops 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 (limited to thin-set installations only when using weak stone)

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

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 Tile & Stone Installation Systems section of MAPEI's Website.

MIXING

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

1. a. Thin-set applications: Into a clean mixing container, pour about 5.5 U.S. qts. (5.20 L) of clean potable water. Gradually add 25 lbs. (11.3 kg) of powder while slowly mixing for at least 1 minute. Adjust the consistency with water, adding up to 1 additional U.S. qt. (946 mL) as needed, without overwatering. Mix again for 2 minutes.
   b. For large-and-heavy-tile and non-sag wall applications: Into a clean mixing container, pour about 5 U.S. qts. (4.73 L) of clean potable water. Gradually add 25 lbs. (11.3 kg) of powder while slowly mixing for at least 1 minute. Adjust the consistency with water, adding up to 1 additional U.S. qt. (946 mL) as needed, without overwatering. Mix again for 2 minutes.
2. Use a low-speed mixing drill (at about 300 rpm), with an angled cross-blade mixer or spiral mixer. Mix thoroughly until the mixture becomes a smooth, homogeneous, lump-free paste. Avoid prolonged mixing.
3. Let the mixture stand ("slake") for 5 minutes.
4. Remix.
5. If the mixture becomes heavy or stiff, remix without adding more liquid or powder.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Choose a typical notched trowel (see the "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 and wet applications. It may be necessary to back-butter the tile 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, parallel to the tile's shortest dimension, with the trowel's notched side.
4. Spread only as much mortar as can be tiled before the 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 the 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 Method EJ171 or TTMAC Specification Guide 09 30 00 Detail 301MJ.
- Do not cover expansion joints with mortar.

CLEANUP

- Clean tools and tile with water 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.
- Large-format tiles may require a longer time to fully set before they can be grouted.

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	250 to 450 psi (1.72 to 3.10 MPa)
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2.07 MPa) at 28 days	450 to 650 psi (3.10 to 4.48 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	400 to 600 psi (2.76 to 4.14 MPa)
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)
ANSI A118.15H – mortar for large and heavy tile	ASTM C627 Robinson Floor Test, lippage change < 1/64" (0.4 mm)	Pass
ANSI A118.15E – extended open time	> 75 psi (0.52 MPa) at 30 minutes	Pass
ANSI A118.15T – sag on vertical surfaces	< 0.02" (0.5 mm) at 20 minutes	Pass

Shelf Life and Product Characteristics
before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C) and 50% relative humidity
Color	Universal color

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

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

** Actual open time, pot life and time before grouting will vary based on jobsite conditions.*

Packaging

Size and Color
Bag: 25 lbs. (11.3 kg), Universal Color

Approximate Coverage**

Typical Trowel	Coverage
For thin-set applications	
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm), square-notch	75 to 90 sq. ft. (6.97 to 8.36 m^2)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notch	55 to 65 sq. ft. (5.11 to 6.04 m^2)
For large-and-heavy-tile applications	
1/2" x 1/2" x 1/2" (12 x 12 x 12 mm), square-notch	38 to 45 sq. ft. (3.53 to 4.18 m^2)
3/4" x 9/16" x 3/8" (19 x 14 x 10 mm), U-notch	25 to 30 sq. ft. (2.32 to 2.79 m^2)

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

RELATED DOCUMENTS

- Reference guide: “Surface preparation requirements” for tile and stone installation systems**
- Technical bulletin: “Tiling over gypsum”**

*** At www.mapei.com*

ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (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 products may contribute to green building standards and certification systems, contact sustainability-durabilite@mapei.com.

CONTACT INFORMATION

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1-800-42-MAPEI (1-800-426-2734)

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For the most current product data and BEST-BACKED[SM] warranty information, visit www.mapei.com.