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MAPEI®

Ultraflex LFT™

Premium, Large-and-Heavy-Tile Mortar with Polymer

DESCRIPTION

Ultraflex LFT is a premium, non-sag, large-and-heavy-tile mortar and thin-set mortar designed for large-format and heavy tile and stone for interior/exterior floor, wall and countertop installations. This mortar has a high content of unique dry polymer, resulting in excellent adhesion to the substrate and tile. It is formulated with Easy Glide Technology™ for ease of application.

FEATURES AND BENEFITS

- Polymer-enriched for high performance and deformability
- Non-sag formula for large-format tile and stone in wall applications
- Nonslump for large-format and heavy tile and stone in floor applications
- For thicker bond coats from 3/32" to 1/2" (2.5 to 12 mm)
- Smooth and creamy consistency makes it easy to apply.

INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification C2TES1P1
- ANSI: Exceeds ANSI A118.4HTE, ANSI A118.11 and ANSI A118.15HTE requirements

WHERE TO USE

- Interior/exterior residential and commercial installations on floors and walls in dry and wet areas (see wall specifications under “Limitations”)
- Installation of ceramic and porcelain tile; cultured stone; quarry tile; pavers; Saltillo tile; and most types of marble, granite and natural stone
- For installing ceramic or porcelain tile in submerged applications (pools, fountains, water features)

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 limestone and granite), agglomerate tiles, cultured marble or resin-backed tiles. Instead, use suitable epoxy or urethane adhesives. See the 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 below.
- 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.
- Do not use for transparent or translucent glass tile.
- For light-colored and translucent natural stone, a white mortar is recommended.
- Consult building code requirements for use on exterior commercial building facades.
- Installations of tile over nonporous surfaces, such as waterproofing membranes and existing tile, may require extended setting/curing times. Dimensionally weak stone (limestone, travertine) is limited to thin-set applications only.

SUITABLE SUBSTRATES

- Concrete (cured for at least 28 days)
- Masonry cement block, brick, cement mortar beds, render coats and leveling coats

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- 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 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).
- Vinyl composition tile (VCT), vinyl and cutback residue (interior installations)
- Existing ceramic and porcelain tile, quarry tile and pavers (interior and dry conditions only)
- MAPEI waterproofing, crack-isolation, sound-reduction and uncoupling membranes

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.
- Substrates to receive thin porcelain tiles must be perfectly flat. When installing thin-body porcelain tile, consult the recommendations regarding surface preparation, trowel selection and mechanical edge-leveling systems in MAPEI's reference guides for thin-body porcelain tile 3 to 6 mm thick for walls, and 4,5 to 6 mm thick for floors. These reference guides can be found in the Tile & Stone Installation Systems section of MAPEI's Website.
- See the "Surface preparation requirements" reference guide in the Tile & Stone Installation Systems section of MAPEI's Website.

MIXING

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

1. Pour clean, potable water into a clean mixing container.

2a. For non-sag/nonslump applications: Use about 6.5 to 7.5 U.S. qts. (6.15 to 7.10 L) of water.

2b. For MAPEI uncoupling and peel-and-stick membranes: Use about 7.5 to 8 U.S. qts. (7.10 to 7.57 L) of water.

3. Gradually add 50 lbs. (22.7 kg) of powder while slowly mixing.
4. 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, homogenous, lump-free paste. Avoid prolonged mixing.
5. Let mixture stand ("slake") for 5 minutes.
6. Remix.
7. If the mixture becomes heavy or stiff, remix it without adding more liquid.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Choose a notched trowel (see the "Approximate Coverage" chart below) with sufficient depth to achieve greater than 85% 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 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 the mortar into the substrate.
3. Apply additional mortar, combing it in a single direction parallel to the tile's shortest dimension, with the trowel's notched side. If thin tile is being installed, it should be placed so that the troweled ridges on its back are oriented in the same parallel direction as the trowel ridges on the substrate.
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 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 while the mortar is fresh, using only water.

PROTECTION

- Do not disturb the installation, allow light traffic or grout any tiles for at least 24 to 48 hours.
- Protect the installation from general traffic for at least 72 hours, and from heavy traffic for at least 7 days.
- Protect the installation from rain for 72 hours, and from freezing for 21 days.
- Cure for 28 days before water immersion

Note: When working in cold temperatures, protect tilework for an extended time for this dry-set mortar to cure before grouting and/or allowing traffic.

MAPEI

ISO 13007 Classification

Classification Code	Classification Requirement
C2 (cementitious, improved adhesive)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
T (vertical slip resistance)	≤ 0.019" (0.5 mm)
E (extended open time)	≥ 72.5 psi (0.5 MPa) after 30 minutes
S1 (normal deformation of mortar)	≥ 0.1" (2.5 mm)
P1 (normal adhesion to plywood)	≥ 72.5 psi (0.5 MPa)

ANSI Specification*

Test Method	Specification Standard	Test Results
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1.03 MPa) at 28 days	170 to 310 psi (1.17 to 2.14 MPa)
ANSI A118.15E – extended open time	≥ 72.5 psi (0.5 MPa) at 30 minutes	Pass
ANSI A118.15 – shear strength, impervious ceramic (porcelain) mosaics	> 400 psi (2.76 MPa) at 28 days	465 to 625 psi (3.21 to 4.31 MPa)
ANSI A118.15 – shear strength, glazed wall tile	> 450 psi (3.10 MPa) at 7 days	570 to 780 psi (3.93 to 5.38 MPa)
ANSI A118.15 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days	310 to 450 psi (2.14 to 3.10 MPa)
ANSI A118.15T – sag on vertical surfaces	< 0.02" (0.5 mm) at 20 minutes	Pass
ANSI A118.15H – mortar for large and heavy tile	ASTM C627 Robinson Floor Test Lippage change < 1/64" (0.4 mm)	Pass

** Anything that meets A118.15 by definition exceeds A118.4.*

Shelf Life and Application Properties before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C)
Colors	Gray, white

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

Open time**	30 to 35 minutes
Pot life**	4 hours
Time before grouting (walls)**	8 to 16 hours
Time before grouting (floors)**	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

Size and Color
Bag: 50 lbs. (22,7 kg), gray
Bag: 50 lbs. (22,7 kg), white

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Approximate Coverage* per 50 lbs. (22.7 kg)

Typical Trowel	Coverage
1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)	85 to 95 sq. ft. (7.90 to 8.83 m²)
1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)	65 to 75 sq. ft. (6.04 to 6.97 m²)
1/2" x 1/2" x 1/2" (12 x 12 x 12 mm)	40 to 50 sq. ft. (3.72 to 4.65 m²)
3/4" x 9/16" x 3/8" (19 x 14 x 10 mm)	35 to 40 sq. ft. (3.25 to 3.72 m²)

** Trowel dimensions are width/depth/space. Actual coverages 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*

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 products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

We proudly support the following industry organizations:

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