

# Ultraflex LFT Rapid

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



## DESCRIPTION

Ultraflex<sup>®</sup> LFT<sup>™</sup> Rapid is a premium, rapid-setting, nonsag, large-and-heavy-tile mortar (formerly known as “medium-bed mortar”) and thin-set mortar for large 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. Thanks to MAPEI’s High-Hydrated Cement Technology (HCT<sup>™</sup>), Ultraflex LFT Rapid offers superior drying-out characteristics for quick curing and does not contribute to efflorescence. Ultraflex LFT Rapid is FastTrack Ready<sup>™</sup>, allowing grouting in 3 to 4 hours.

## FEATURES AND BENEFITS

- Polymer-enriched for high performance and deformability
- Nonsag formula for large-format and heavy 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.
- Allows grouting in 3 to 4 hours

## INDUSTRY STANDARDS AND APPROVALS

- ISO 13007: Classification C2TFS1P1
- ANSI: Exceeds A118.4FHT, A118.11 and A118.15FHT requirements

## WHERE TO USE

- Interior/exterior residential and commercial installations on floors and walls in dry and wet areas (see wall specifications under “Limitations”)
- Approved for submerged applications
- Installation of ceramic and porcelain tile; engineered stone; 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 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.
- For installations of light-colored and translucent natural stone, a white mortar is recommended.
- Consult building code requirements regarding use on exterior commercial facades.
- 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
- 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 only)
- Existing ceramic and porcelain tile, quarry tile and pavers (interior installations and dry conditions only)
- MAPEI waterproofing, crack-isolation, sound-reduction and uncoupling 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.
- Substrates that will 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 for 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. Into a clean mixing container, pour about 5.5 to 6.75 U.S. qts. (5.20 to 6.39 L) of clean potable water. Mix to the desired consistency: Use a thicker consistency with a lower water ratio for nonslip wall applications, and use a thinner consistency with a higher water ratio for use with MAPEI uncoupling and peel-and-stick membranes.
2. Gradually add 50 lbs. (22.7 kg) of powder while slowly mixing.
3. 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.
4. Do not slake. Spread immediately.
5. 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 80% mortar contact to both the tile and substrate for all interior applications, and greater than 95% for exterior installations and wet applications. It may be necessary to back-butter the tile in order to reach 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 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  $\frac{2}{3}$  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

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

## PROTECTION

- Do not disturb the installation, allow light traffic or grout tiles for at least 3 to 4 hours.
- Protect the installation from general traffic for at least 6 hours, and from heavy traffic for 24 hours.
- Protect the installation from rain for 36 hours, and from freezing for 5 days.
- Large-format tile and low-absorption tile may require a longer time to fully set before tiles are grouted.

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.

### 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)
F (fast-setting)	≥ 72.5 psi (0.5 MPa) at 6 hours
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 300 psi (1.17 to 2.07 MPa)
ANSI A118.15 – shear strength, impervious ceramic (porcelain) mosaics	>400 psi (2.76 MPa) at 28 days	410 to 625 psi (2.83 to 4.31 MPa)
ANSI A118.15 – shear strength, glazed wall tile	>450 psi (3.10 MPa) at 7 days	450 to 700 psi (3.10 to 4.83 MPa)
ANSI A118.15 – shear strength, quarry tile to quarry tile	>150 psi (1.03 MPa) at 28 days	500 to 725 psi (3.45 to 5 MPa)
ANSI A118.15F – shear strength, impervious ceramic (porcelain) mosaics	>50 psi (0.34 MPa) at 4 hours	Pass

ANSI A118.15H – mortar for large and heavy tile	ASTM C627 Robinson Floor Test Lippage change < 1/64" (0.4 mm)	Pass
ANSI A118.15T – sag on vertical surfaces	≤ 0.2 in. (0.5 mm)	Pass

\* Anything that meets A118.5 by definition exceeds A118.4.

### Shelf Life and Application Properties

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

<b>Shelf life</b>	1 year when stored in original, unopened packaging
<b>Open time**</b>	10 to 20 minutes
<b>Pot life**</b>	30 minutes
<b>Time before grouting**</b>	3 to 4 hours
<b>VOCs (Rule #1168 of California's SCAQMD)</b>	0 g per L

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

### Packaging

<b>Size and Color</b>
Bag: 50 lbs. (22.7 kg), gray
Bag: 50 lbs. (22.7 kg), white

### 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), square-notch	75 to 90 sq. ft. (6.97 to 8.36 m <sup>2</sup> )
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 <sup>2</sup> )
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 <sup>2</sup> )
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 <sup>2</sup> )

\*\*\* 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<sup>†</sup>
- Technical bulletin: “Tiling over gypsum”<sup>†</sup>

<sup>†</sup>At [www.mapei.com](http://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](mailto:sustainability-durabilite@mapei.com).

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

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