MAPEI’s ANSI A118.15 tile and stone mortars

Granirapid
Kerabond T / Keralastic
Kerabond/Keralastic
Keraflex Super
Ultraflex LFT
Ultraflex LFT Rapid

MAPEI Ultralite Mortar
MAPEI Ultralite S1 Quick
MAPEI Ultralite S2
Ultraflex 3
Ultraflex RS
How MAPEI has expanded its A118.15 mortar offering

In 2012, the tile installation industry finalized the new category “Improved Modified Dry-Set Cement Mortars” that is designated A118.15, and updated the standard’s testing requirements for 2018. This standard joined A118.1 (unmodified mortars), A118.4 (modified standard mortars) and A118.11 (mortars for use over plywood) as an additional tool in differentiating products. The A118.15 standard details the requirements for high-performance mortars that can be used in freeze/thaw environments, submerged applications, areas with elevated expansion and deflection, hot environments, etc. Additionally, the standard allows mortars to be categorized as extended working time (E), slip-resistant (T) and fast-setting (F).

MAPEI has pushed for this standard for many years as the U.S. market has been slow to adopt the Europe’s ISO criteria for mortars that already include the “E,” “T” and “F” categories. MAPEI also was instrumental in developing the testing methodology and minimum performance requirements for A118.15 while working with the labs and technical departments of other industry participants. This standard allows specifiers to call out the performance requirements that they need on the job without fear that the installer will substitute a less robust product due to last-minute value engineering.

For years, MAPEI has listed the ISO standards that its products meet and is proud to list the ANSI A118.15 information as well. Because the requirements for ISO and ANSI differ somewhat, MAPEI has had to carefully engineer its mortars to be able to meet both. Many MAPEI mortars are fully compliant with the A118.15 standard, and those “meeting and exceeding” the specification will indicate this on their Technical Data Sheets and packaging. These mortars have been tested for and passed all 12 of the standard’s requirements (15 requirements for fast-setting mortars). See the charts on the back cover for the requirements.

MAPEI has previously featured several mortars as fully compliant with ANSI A118.15: Granirapid® System, Kerabond/Keralastic™ System, Kerabond® T / Keralastic® System, Ultraflex™ 3 and Ultraflex RS. MAPEI is proud to extend this list with additional mortars that were optimized to achieve this standard: Keraflex Super™, Ultraflex LFT™, Ultraflex LFT Rapid, MAPEI Ultralite™ S2, MAPEI Ultralite Mortar and MAPEI Ultralite S1 Quick are mortars that fully meet all aspects of A118.15.

For help in interpreting the data and in deciding whether mortars under consideration are a good fit for service environments – as defined in the Tile Council of North America’s (TCNA) Handbook or the Terrazzo Tile and Marble Association of Canada’s (TTMAC) Tile Installation Manual – contact MAPEI’s Technical Services Department or view the technical data at www.mapei.com.
MAPEI’s expanded offering of ANSI A118.15 mortars

MAPEI’s ANSI A118.15 high-performance mortars allow specifiers to call out desired job installation requirements, while protecting contractors from value engineering bidding, providing all the benefits of the characteristics described by the TCNA Handbook.

Granirapid System
Premium, rapid-setting, flexible tile mortar

FEATURES AND BENEFITS
- Two-component system for maximum deformability
- High-performance bond strengths
- Early mechanical strength development
- Best for most difficult tiles, substrates and conditions
- Allows grouting in 3 to 4 hours
- Superior drying-out characteristics
- Low residual moisture does not contribute to efflorescence
- Allows water submersion in 72 hours
- Excellent for large tile and ungauged tile
- Excellent freeze/thaw durability
- Lifetime commercial/residential system warranty

INDUSTRY STANDARDS AND APPROVED USES
- ISO 13007: Classification C2FS2P2
- ANSI: Meets or exceeds ANSI A118.4F, ANSI A118.11 and ANSI A118.15F bond-strength requirements
- Approved for exterior facades
- Approved for submerged applications
- Approved for steam rooms

Product Code | Color | Packaging
---|---|---
7052057 | N/A | Jug: 2 U.S. gals. (7.57 L)
7052056 | N/A | Pail: 5 U.S. gals. (18.9 L)
7052055 | N/A | Drum: 55 U.S. gals. (208 L)
7051040 | Gray | Bag: 50 lbs. (22.7 kg)
7051041 | White | Bag: 46 lbs. (20.9 kg)

Kerabond/Keralastic System
Premium, flexible tile mortar

FEATURES AND BENEFITS
- Two-component system for maximum deformability
- Best for most difficult tiles, substrates and conditions
- Exceptional bond strength, flexural strength and elongation
- Excellent freeze/thaw durability
- Lifetime commercial/residential system warranty

INDUSTRY STANDARDS AND APPROVED USES
- ISO 13007: Classification C2ES2P2
- ANSI: Meets or exceeds ANSI A118.4E, ANSI A118.11 and ANSI A118.15E bond-strength requirements
- Approved for exterior facades
- Approved for submerged applications
- Approved for steam rooms

Product Code | Color | Packaging
---|---|---
10152 | Gray | Bag: 50 lbs. (22.7 kg)
10252 | White | Bag: 50 lbs. (22.7 kg)
7022007 | N/A | Jug: 2 U.S. gals. (7.57 L)
7020020 | N/A | Pail: 5 U.S. gals. (18.9 L)
7020200 | N/A | Drum: 55 U.S. gals. (208 L)
**Kerabond T / Keralastic System**

**Premium, flexible large-and-heavy-tile and thin-set mortar**

**FEATURES AND BENEFITS**

- Two-component system for maximum deformability
- High-performance bond
- Best for most difficult tiles, substrates and conditions
- For thicker bond coats from 3/32" to 1/2" (2.5 to 12 mm)
- Excellent for large tile and ungauged tile
- Exceptional bond strength, flexural strength and elongation
- Excellent freeze/thaw durability
- Lifetime commercial/residential system warranty

**INDUSTRY STANDARDS AND APPROVED USES**

- ISO 13007: Classification C2ES2P2
- ANSI: Meets or exceeds A118.4HE, A118.11 and A118.15HE requirements
- Approved for exterior facades
- Approved for submerged applications
- Approved for steam rooms

**Keraflex Super**

**Premium, extra smooth, large-and-heavy-tile mortar with polymer**

**FEATURES AND BENEFITS**

- High-Transfer Technology™ to provide outstanding transfer of mortar to tile backs – combined with tenacious bond strength
- Extra smooth, creamy consistency for ease of application
- Easy mixing, handling and troweling properties
- Highly resistant to extreme freeze/thaw conditions
- Ideal for lippage control systems applications
- Non-sag/nonslump formula for large-format and heavy tile/stone in wall and floor applications
- For bond coats up to 1/2" (12 mm) in embedded thickness
- Lifetime commercial/residential system warranty

**INDUSTRY STANDARDS AND APPROVED USES**

- ISO 13007: Classification C2TES1P1
- ANSI: Exceeds A118.4HTE, A118.11 and A118.15HTE requirements
- Approved for interior/exterior water immersion applications, including water features, fountains and pools
- Approved for exterior facades

**Ultraflex LFT**

**Premium, large-and-heavy-tile mortar with polymer**

**FEATURES AND BENEFITS**

- Polymer-enriched for high performance and deformability
- Non-sag formula for large and heavy tile and stone in wall applications
- Nonslump for large and heavy tile and stone in floor applications
- For thicker bond coats from 3/32" to 1/2" (2.5 to 12 mm) thick
- Smooth and creamy consistency for easy handling and application
- Lifetime commercial/residential system warranty

**INDUSTRY STANDARDS AND APPROVED USES**

- ISO 13007 classification C2TES1P1
- ANSI specifications A118.4HTE, A118.11 and A118.15HTE requirements
- Approved for exterior facades
- Approved for submerged applications
- Exceptional open time
- Excellent adjustability
MAPEI Ultralite S2
Premium, highly deformable, lightweight thin-tile mortar with polymer

**FEATURES AND BENEFITS**
- Polymer-enriched for high performance and deformability
- Extended coverage formula for most types and sizes of thin tiles
- Smooth, creamy consistency with easy-glide troweling
- For thicker bond coats from 3/32" to 1/2" (2.5 to 12 mm)
- Allows grouting in 3 to 4 hours
- Lifetime commercial/residential system warranty

**INDUSTRY STANDARDS AND APPROVED USES**
- ISO 13007: Classification C2ES2P2
- ANSI: Meets or exceeds ANSI A118.4HE, ANSI A118.11 and ANSI A118.15HE bond-strength requirements
- Approved for exterior facades
- Approved for submerged applications

**PRODUCT CODES**
- U.S.: 1201511, 1201611
- Canada: 1201511C, 1201611C
- **Color** Gray, White
- **Packaging** Bag: 25 lbs. (11.3 kg)

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Ultraflex LFT Rapid
Premium, rapid-setting, large and heavy-tile mortar with polymer

**FEATURES AND BENEFITS**
- Polymer-enriched for high performance and deformability
- Non-sag formula for large and heavy tile and stone in wall applications
- Nonslump for large 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
- Lifetime commercial/residential system warranty

**INDUSTRY STANDARDS AND APPROVED USES**
- ISO 13007: Classification C2TFS1P1
- ANSI: Meets or exceeds ANSI A118.4HTF, ANSI A118.11 and ANSI A118.15HTF bond-strength requirements
- Exceptional open time and pot life
- Approved for exterior facades
- Approved for submerged applications

**PRODUCT CODES**
- U.S.: 14150, 14250
- Canada: 14150, 14250
- **Color** Gray, White
- **Packaging** Bag: 50 lbs. (22.7 kg)
MAPEI Ultralite S1 Quick
Premium, rapid-setting, lightweight mortar with polymer for large and heavy tile

FEATURES AND BENEFITS
• Polymer-enriched for high performance and deformability
• Non-sag formula for large and heavy tile and stone in wall applications
• Nonslump for large and heavy tile and stone in floor applications
• Smooth and creamy consistency for easy handling and application
• For bond coats up to 1/2” (12 mm)
• 25-lb. (11.3-kg) bag provides the same coverage as a 50-lb. (22.7-kg) bag of a standard polymer-modified mortar
• Ready to grout in 3 to 4 hours
• Contributes to green projects that require greater than 15% recycled content
• Lifetime commercial/residential system warranty

INDUSTRY STANDARDS AND APPROVED USES
• ISO 13007: Classification C2TFS1P1
• ANSI: Exceeds ANSI A118.4HTF, ANSI A118.11 and ANSI A118.15HTF bond-strength requirements
• SCS Green Squared Certified per ANSI A138.1
• Approved for steam rooms
• Approved for exterior facades

Ultraflex 3
Premium tile mortar with polymer

FEATURES AND BENEFITS
• Polymer-enriched for high performance and deformability
• High content of unique dry polymer
• Superior adhesion to substrate and tile
• Can be used in both thin-set and large-and-heavy-tile applications
• Excellent freeze/thaw durability
• Lifetime commercial/residential system warranty

INDUSTRY STANDARDS AND APPROVED USES
• ISO 13007: Classification C2ES1P1
• ANSI: Exceeds ANSI A118.4E, ANSI A118.11 and ANSI A118.15E bond-strength requirements
• Approved for exterior facades
• Approved for submerged applications

Ultraflex RS
Premium, rapid-setting tile mortar with polymer

FEATURES AND BENEFITS
• Polymer-enriched for high performance and deformability
• High content of unique dry polymer
• Superior adhesion to substrate and tile
• Ready to grout in 2 to 3 hours
• 25-year commercial/residential system warranty

INDUSTRY STANDARDS AND APPROVED USES
• ISO 13007: Classification C2FS1P1
• ANSI: Exceeds ANSI A118.4F, ANSI A118.11 and ANSI A118.15F requirements for fast-setting mortars

U.S./Canada
Product Code | Color | Packaging
---|---|---
2428011 | Gray | Bag 25 lbs. (11.3 kg)
2428611 | White | Bag 25 lbs. (11.3 kg)

Product Code | Color | Packaging
---|---|---
0060058 | Gray | Bag 50 lbs. (22.7 kg)
0060059 | White | Bag 50 lbs. (22.7 kg)

U.S./Canada
Product Code | Color | Packaging
---|---|---
0110044 | Gray | Bag 25 lbs. (11.3 kg)
0110045 | Gray | Bag 50 lbs. (22.7 kg)
0110047 | White | Bag 50 lbs. (22.7 kg)
**Requirements for A118.15-compliant mortars**

The following tests in italics deal with extreme conditions that are challenging for mortars to meet.

<table>
<thead>
<tr>
<th>Test</th>
<th>Property</th>
<th>Test Section</th>
<th>Duration</th>
<th>Requirement</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Open time</td>
<td>5.3.6</td>
<td>20 minutes</td>
<td>75 psi (0.52 MPa) or higher</td>
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<tr>
<td>2</td>
<td>Glazed wall tile shear strength</td>
<td>7.1.2</td>
<td>7 days</td>
<td>450 psi (3.10 MPa) or higher</td>
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<td>3</td>
<td>Glazed wall tile shear strength</td>
<td>7.1.3</td>
<td>7 days, water immersion</td>
<td>250 psi (1.72 MPa) or higher</td>
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<td>4</td>
<td>Glazed wall tile shear strength</td>
<td>7.1.4</td>
<td>28 days, heat aging</td>
<td>450 psi (3.10 MPa) or higher</td>
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<td>5</td>
<td>Porcelain tile shear strength</td>
<td>7.2.2</td>
<td>1 day</td>
<td>100 psi (0.69 MPa) or higher</td>
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<tr>
<td>6</td>
<td>Porcelain tile shear strength</td>
<td>7.2.3</td>
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<td>300 psi (2.07 MPa) or higher</td>
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<td>7</td>
<td>Porcelain tile shear strength</td>
<td>7.2.4</td>
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<td>8</td>
<td>Porcelain tile shear strength</td>
<td>7.2.5</td>
<td>28 days</td>
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<td>9</td>
<td>Porcelain tile shear strength</td>
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<td>28 days, with freeze/thaw cycling</td>
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<td>11</td>
<td>Quarry tile shear strength</td>
<td>7.3.2</td>
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<td>150 psi (1.03 MPa) or higher</td>
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<td>12</td>
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<td>7.3.3</td>
<td>28 days, with freeze/thaw cycling</td>
<td>100 psi (0.69 MPa) or higher</td>
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**Additional requirements for A118.15E-, A118.15F- and A118.15T-compliant mortars**

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<th>Test</th>
<th>Property</th>
<th>Test Section</th>
<th>Duration</th>
<th>Requirement</th>
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</thead>
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<td>Final set (A118.15F)</td>
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<td>&lt; 4 hours</td>
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<td>16</td>
<td>Porcelain tile shear strength (A118.15F)</td>
<td>7.5.1</td>
<td>4 hours</td>
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<td>Sag (A118.15T)</td>
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<td>20 minutes</td>
<td>.02&quot; (0.5 mm) or less</td>
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