



Slurry Bond Coats – When and What to Use TDS 143

Introduction – Polymer or Latex Fortified Slurry Bond Coats For Traditional Mortar Beds

LATICRETE® latex slurry bond coats are used to bond ‘wet’ consistency toppings or leveling beds over horizontal substrates, such as concrete or masonry. In any case, their purpose is to provide an adhesive layer that bonds the substrate and the material going over it.

For tile setting purposes, traditional installation methods required dusting dry cement, or spreading a cement paste/slurry over the semi-dry mortar bed just prior to placing the tiles. The tiles are then placed in the dry cement powder or, more correctly, a portland cement/water paste and "beaten" to imbed them fully in the mortar bed. “Beating” attaches a layer of cement rich paste as an adhesive between the sandy mortar bed surface and the tile backs.

Instead of the traditional cement paste, 254 Platinum, 257 TITANIUM™ or MULTIMAX LITE™, mixed to a soft, wet slurry consistency is applied with a flat side of a trowel over the bed. The slurry is usually just 1/16” (1-2 mm) thick. The tiles are placed in the wet slurry and "beat-in" with a rubber mallet and beating block. This method requires the bonded mortar bed to have a minimum thickness of 3/4” (19 mm).

A slurry bond coat is also used to bond a new day’s mortar bed placement to a previously installed and hardened mortar bed. The slurry bond coat is brush applied to the edge of the mortar bed to create a bond.

There are 2 methods of tile installation when using a bonded mortar bed as your tile substrate; the pre-screed method and the wet set method.

The pre-screed method (allowing the bonded mortar bed to cure before the application of tile) allows the bonded mortar to have nominal thickness, the mortar bed can be screeded as low as the aggregate will allow.

The wet set method (setting tile on top of uncured semi dry mortar bed and beat in with a slurry) has a required minimum thickness of 3/4” (19 mm).

Replacing the traditional cement/water paste with a slurry bond coat of 254 Platinum or 257 Titanium™, results in many benefits:

- 1). Eliminates soaking and draining tile - increasing production dramatically
- 2). Much longer open time – more tile can be applied before the slurry dries
- 3). Provides 500% higher bond strength than traditional cement slurries
- 4). Low cost

The LATICRETE System includes a variety of materials that can be utilized in Slurry Bond Coat applications depending on site conditions and other factors.

Recommended Slurry Bond Coat Mortars:

I. 254 Platinum (mixed with water)

Unequaled strength and flexibility in a polymer-fortified cementitious mortar combined with excellent working time - excellent open and setting time;

For use:

- 1). over concrete before placing a ‘semi-dry’ consistency traditional mortar bed (no minimum thickness);
- 2). over ‘semi-dry’ consistency traditional mortar beds before placing ceramic tile, stone or thin brick. (3/4” min. (19 mm) Thickness)

Typical Mix Ratio: 7 quarts (6.6 L) water: 50 lbs. 254 Platinum

Approximate Coverage @ 1/16" (1.5 mm) thickness: 120 - 130 ft² (11.1 - 12 m²) per stated mix proportions

II. 257 TITANIUM™

Excellent strength and flexibility in a polymer-fortified cementitious mortar combined with excellent working time - excellent open and setting time;

For use:

- 1). over concrete before placing a 'semi-dry' consistency traditional mortar bed (no minimum thickness);
- 2). over 'semi-dry' consistency traditional mortar beds before placing ceramic tile, stone or thin brick. (3/4" min. (19 mm) Thickness)

Typical Mix Ratio: 5.25 quarts (5 L) water: 25 lbs. 257 Titanium

Approximate Coverage @ 1/16" (1.5 mm) thickness: 110 - 125 ft² (10 - 11.5 m²) per stated mix proportions

II. MULTIMAX™ LITE

Excellent strength and flexibility in a polymer-fortified cementitious mortar combined with excellent working time - excellent open and setting time;

For use:

- 1). over concrete before placing a 'semi-dry' consistency traditional mortar bed (no minimum thickness);
- 2). over 'semi-dry' consistency traditional mortar beds before placing ceramic tile, stone or thin brick. (3/4" min. (19 mm) Thickness)

Typical Mix Ratio: 6 quarts (5.7 L) water: 25 lbs. MULTIMAX LITE

Approximate Coverage @ 1/16" (1.5 mm) thickness: 110 - 125 ft² (10 - 11.5 m²) per stated mix proportions

III. 3701 Mortar Admix

Mixed with 272 Mortar or 317 Mortar

Provides long time, strength and flexibility and allows the convenience of using the same latex additive for 'semi-dry' consistency mortar beds and bond coats – only one latex additive is needed on site.

For use:

- 1). Over concrete before placing a 'semi-dry' consistency traditional mortar bed (no minimum thickness);
- 2). Over a 'semi-dry' consistency traditional mortar bed before placing ceramic tile, stone or brick.

Typical Mix Ratio: 1 volume 3701 Mortar Admix: 1 volume 272 Mortar or 317 Mortar;

Approximate Coverage @ 1/16" (1.5 mm) thickness: 70-90 ft² (6.5-8.5 m²) per gallon (3.8 L) of 3701 Mortar Admix.

IV. 333 Super Flexible Additive

Mixed with 272 Mortar or 317 Mortar

Provides long time and strength but with superior flexibility for increased resistance to impact or substrate flexure.

For use:

- 1). Over concrete before placing a 'semi-dry' consistency traditional mortar bed (no minimum thickness);
- 2). Over a 'semi-dry' consistency traditional mortar bed before placing ceramic tile, stone or brick.

Typical Mix Ratio: 1 volume 333 Super Flexible Additive: 1 volume 272 Mortar, 317 or 220 Marble & Granite Mortar (1:1.5 by weight);

Approximate Coverage @ 1/16" (1.5 mm) thickness: 70-90 ft² (6.5-8.5 m²) per gallon (3.8 L) of 333 Super Flexible Additive;

Notes: Exterior use limited to residential or light commercial applications and areas not subject to water immersion.

V. LATAPOXY® 300 Adhesive

Provides chemical resistance and bond strength that are superior to any latex modified portland cement slurry bond coat. Specifically designed for installing ‘green’ marble or other moisture sensitive stone and agglomerates. Meets or exceeds all ANSI A118.3 requirements.

For use:

- 1). Over concrete before placing a ‘semi-dry’ consistency traditional mortar bed (no minimum thickness);
- 2). Over a ‘semi-dry’ consistency traditional mortar bed before placing ceramic tile, stone or brick;
- 3). Over Steel:

Option 1: LATAPOXY 300 Adhesive should be skimmed, then notched and allowed to cure with the notched trowel ridges “standing tall” – followed by a slurry bond coat of 254 Platinum or 257 Titanium™ before placing a ‘semi-dry’ consistency traditional mortar bed consisting of LATICRETE 3701 Fortified Mortar Bed.

Option 2: before placing a ‘semi dry’ consistency traditional mortar bed (no minimum thickness) consisting of LATICRETE 3701 Fortified Mortar Bed. – A mock up should be done and approved.

- 4). For direct bond as an adhesive mortar over steel to install ceramic tile, stone or brick.

Typical Mix Ratio: See package instructions;

Approximate Coverage@ 1/16” (1.5 mm) thickness: 90-110 ft² (8.4-10.2 m²) per #2 Unit.

Consult Data Sheet 633.0 and package instructions for further information.

Limitations:

- 1) In **cold climate** conditions, or under **wet consistency** topping, leveling or patching mortars, or with ‘**negative**’ cast panels, do **not** use the following mortars as Slurry

Bond Coats:

A) 3701 Mortar Admix mixed with 272 Mortar or 317 Mortar;

B) 333 Super Flexible Additive with 272 Mortar 317Mortar;

- 2) Over **vertical** concrete, renders, plasters, stuccoes or other masonry, **do not** use Slurry Bond Coats – they will cause plastic consistency plasters, stuccos or mortars to slump or slide and are not needed to achieve a strong bond if the coating is properly troweled or worked into full contact with a clean substrate.
- 3) To provide superior bond over **vertical** concrete, renders, plasters, stuccoes or masonry, all of the Slurry Bond Coat mortars described above can be applied as a separate ‘key’ coat (either by trowelling or by the ‘spatter dash’/’dash coat’ method – see TDS 130); however, the ‘key coat’ must be allowed to set firm before the next coat or final finish coat is applied.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at www.laticrete.com
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