



LATAPOXY® 310 Stone Adhesive

DS-679.0-0317

**Globally Proven
Construction Solutions**



1. PRODUCT NAME

LATAPOXY® 310 Stone Adhesive

2. MANUFACTURER

LATICRETE International, Inc.
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Bethany, CT 06524-3423 USA

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3. PRODUCT DESCRIPTION

LATAPOXY 310 Stone Adhesive is a two component, high strength epoxy adhesive, which is formulated for the spot bonding method of tile and stone installations on vertical surfaces. LATAPOXY 310 Stone Adhesive maintains its non-sag consistency at high temperatures up to 95°F (35°C).

Uses

- Spot bonding marble, granite, adhered masonry veneer and large format ceramic tile on walls and overheads, interior or exterior applications
- Ideal for fireplace surrounds, elevators and stair risers
- Adhesive for bedding and fastening marble, granite and other stone slabs on walls and wainscoting
- Adhesive for fabricating granite, marble and other stone
- Approved by TCNA for interior applications method W215 and W260

Advantages

- Fast Permanent Bond—45 minutes to 1 hour set time
- Easy to Use—1:1 mixing ratio by volume
- Non-Staining—ideal for white and light colored marbles, other stones and tiles
- Withstands shock and vibration

- Durable permanent bond, will not deteriorate over time
- Safe—no solvents
- Non-Sag—when applied up to 1" (25 mm) thick
- Rapid version is available; 5–8 minute set up
- Conforms to EN 12004 and ISO 13007 with a classification of R2T

Acceptable Substrates

Please contact LATICRETE Technical Services at 1.800.243.4788, ext. 235 for specific installation details.

Interior Substrates

- Concrete
- Concrete masonry units (CMU)
- Brick/masonry
- Exterior glue plywood¥
- Cement backer board*
- Steel**

* Consult cement backer board manufacturer for specific installation recommendations.

**Steel surface must be cleaned to remove oil, dust oxidation and other bond inhibiting materials.

¥Fire-treated, marine grade or other chemically treated plywood panels are not acceptable substrates.

Exterior Substrates

Please consult LATICRETE Technical Services at 1.800.243.4788, ext. 235 for approval prior to use for all exterior applications. There is a maximum height restriction of 30 ft (9.1 m). For exterior installations outside of North America, contact the LATICRETE International, Inc. International Department at 1.800.243.4788, ext. 230.

- Concrete
 - Must be minimum 6" (150 mm) thick reinforced
 - Must be minimum 3500 psi (24 MPa)
 - Must be minimum 28 days old prior to installation
- CMU
 - Double wythe walls only

Packaging

- Mini Unit—2 gal (8 L) units packed in one carton.
 - 8 mini jars of Part A, 0.5 QT (0.5 L)
 - 8 mini jars of Part B, 0.5 QT (0.5 L),
 - 40 cartons per pallet, Available in standard and rapid versions
- Full Unit—2.6 gal (10 L) All components packed in one carton
 - 1.3 gal (5 L) Part A pail
 - 1.3 gal (5 L) Part B pail,
 - 40 cartons per pallet, Available in standard and rapid versions.
- Cartridge Packs—2.3 gal (9 L) For use in LATAPOXY 310 Cordless Mixer:

-15 x 20oz (600 mL) cartridge packs of Part A and Part B per carton, 27 cartons per pallet. Available in standard and rapid version.

- Commercial unit 5.2 gal (20 L) containing the following:
 - 2.6 gal (10 L) Part A pail
 - 2.6 gal (10 L) Part B pail

Cartridge Pack Coverage

One carton (15 cartridges) will yield approximately 150 ft² (14 m²) with 1/4" (6 mm) thick dabs, or 300 ft² (27 m²) with 1/8" (3 mm) thick dabs when covering 10% of the veneer surface.

Coverage

The coverage for LATAPOXY® 310 Stone Adhesive will vary depending upon the amount of product required to plumb the wall. The chart below is based on 10% coverage of the area of each tile or stone piece.

| Average Inches (or millimeters) Out of Plumb | LATAPOXY® 310 Thickness | Approx. Coverage/ 10 Liter Unit |
|--|-------------------------|---|
| Plumb Wall | 1/8" Thick (3 mm) | 300–325 ft ² (27–30 m ²) |
| 1/4" (6 mm) | 1/4" Thick (6 mm) | 150–170 ft ² (14–16 m ²) |
| 1/2" (12 mm) | 1/2" Thick (12 mm) | 75–80 ft ² (7–7.5 m ²) |

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for two (2) years if stored at >32°F (>0°C) to <110°F (<43°C).

Limitations

- Surface temperature for application: 50°F (10°C)—95°F (35°C). For exterior applications, contact Technical Services at 1.800.243.4788, ext. 235 or support@laticrete.com for approval prior to use.
- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- Sandstone, slate and fissile stones are not recommended veneers and should not be used with LATAPOXY 310 Rapid Stone Adhesive. These stones and other porous stones may delaminate or break apart due to the nature of their porous and layered composition.
- DO NOT bond to particle board fire-retardant plywood, marine grade plywood, luan, Masonite® any chemically treated plywood, or hardwood surfaces.

Note: Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/360 for thin bed ceramic tile/brick installations or, L/480 for thin bed stone installations or L/600 for exterior veneers where L=span length (except where local building codes specify more stringent deflection requirements)

Cautions

Consult MSDS for more safety information.

- Keep out of reach of children.
- LATAPOXY 310 Stone Adhesive has a slight, non-hazardous odor.
- During cold weather, protect finished work from traffic until fully cured.

- LATAPOXY 310 Stone Adhesive Part A is corrosive to eyes and skin before curing. Avoid contact with eyes and or prolonged contact with skin. In case of contact, flush thoroughly with water.
- Consult local building code for requirements.

4. TECHNICAL DATA

Applicable Standards

ANSI A118.3, EN 12004 and ISO 13007

Physical Properties

LATAPOXY 310 Stone Adhesive

| Test | Test Method | Results |
|--|-------------------------------|---------------------------------------|
| Consistency | LATICRETE in house | No sag in thickness to 1 inch (25 mm) |
| Pot Life at 72°F (20°C) | LATICRETE in house | 30–45 minutes |
| Set Time at 72°F (20°C) | LATICRETE in house | 5–6 hours |
| Shear Bond Strength Marble to Concrete | ANSI A118.3–5.5 [^] | 730–920 psi (5–6.3 MPa) |
| Compressive Strength | ANSI A118.3–5.6 | 8300–8450 psi (57–58 MPa) |
| Tensile Strength | ANSI A118.3–5.7 | 1500–2100 psi (10.3–14.5 MPa) |
| Thermal Shock | ANSI A118.3–5.8 ^{^^} | 1030–1600 psi (7–11 MPa) |

[^] modified test method

^{^^} tile modified to porcelain tile

| Test | Test Method | ISO 13007-1 R2 Specification | Results |
|---|-------------------|--|------------------------------|
| 7 day cure shear adhesive strength | ISO 13007-2 4.3.4 | 2 MPa (290 psi) | 18 – 33 MPa (2610–4785 psi) |
| 7 day cure 21 day water immersion shear adhesive strength | ISO 13007-2 4.3.5 | 2 MPa (290 psi) | 14–34 MPa (2030–4930 psi) |
| 7 day cure 4 100°C boiling water cycles shear adhesive strength | ISO 13007-2 4.3.8 | 2 MPa (290 psi) | 22–36 MPa (3190–5220 psi) |
| Open time after 20 minutes | ISO 13007-2 4.1 | 0.5 MPa (73 psi) | 2.8–3.8 MPa (406–551 psi) |
| Slip | ISO 13007-2 4.2 | Less than or equal to 0.5 mm (0.02 in) | 0.1–0.3 mm (0.0039–0.012 in) |
| Transverse deformation | ISO 13007-2 4.5 | Greater than or equal to 2.5 mm (0.1 in) and less than 5 mm (0.2 in) | 3.2–3.6 mm (0.13–0.14 in.) |

LATAPOXY® 310 Stone Adhesive is ISO 13007-1 R2T

Working Properties

LATAPOXY® 310 Stone Adhesive

| Consistency | No Sag in Thickness to 1" (25 mm) |
|------------------------|-----------------------------------|
| Pot Life @ 72°F (20°C) | 30–45 minutes |
| Set Time @ 72°F (20°C) | 5–6 hours |

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions.

Temperature Effects

LATAPOXY 310 Stone Adhesive

| Temperature | Pot Life | Set Time |
|-------------|-------------|-------------|
| 40°F (4°C) | 100 minutes | 10 hours |
| 70°F (21°C) | 45 minutes | 5–6 hours |
| 90°F (32°C) | 25 minutes | 2.5–3 hours |

5. INSTALLATION

Preparation

Store resins at room temperature (>70°F [>21°C]) for 24 hours before using. All surfaces must be sound, clean, and free of oil, waxes, frost, curing agents, form release agents or other bond inhibiting contaminants. All substrates must be clean and dry when application of LATAPOXY 310 Stone Adhesive is made. Expansion joints shall be provided through the tile work from all construction or expansion joints in the substrate. Follow ANSI specification A108.01-3.7 "Requirements for Movement Joints: Preparations by Other Trades" or TCNA detail EJ-171 "Movement Joints—Vertical & Horizontal". Do not cover expansion joints with mortar.

Finished veneers equipped with any type of resin, mesh, epoxy or fiberglass backing must be ground down to the bare stone in those areas to receive LATAPOXY 310 Stone Adhesive.

Clean and grind back of stone at areas to receive the LATAPOXY 310 Stone Adhesive spots using a mechanical wheel grinder with a diamond wheel/blade. Remove dust with a stiff brush and wipe entire surface. Using a damp sponge (not wet), wipe the tile or stone to remove any particles or remaining dust to ensure a clean direct bond and that all ground material is removed. Wipe dry with a clean cloth, then apply LATAPOXY 310 Stone Adhesive.

Recommended Guidelines for Spot Bonding Stone:

(Please consult your Local Code for actual code compliance)

1. Interior Stone or Tile Applications
 - Thickness – units shall not exceed 2" (50mm).
 - Module Weight – 20 lb/ft² (73 kg/m²) unless otherwise approved by project engineer.
2. Exterior Porcelain Tile (applications)
 - Thickness – units shall not exceed 5/8" (16mm).
 - Facial Dimensions – maximum of 432 in² (0.28m²) and no greater than 24" (610mm) along any edge or dimension.
 - Module Weight – 9 lb/ft² (44.2 kg/m²) unless otherwise approved by project engineer.
3. Exterior Stone Applications
 - Thickness – units shall not exceed 2" (50mm)
 - Facial Dimensions – maximum of 720 in² (0.46m²) and no greater than 36" (915mm) along any edge or dimension.

- Module Weight – 15 lb/ft² (73 kg/m²) unless otherwise approved by project engineer.
- Height – No more than 30 ft (9.1 m)

Note: Always check with the tile or stone manufacturer to make sure the tile or stone is suitable for vertical and exterior (if applicable) installations.

Mixing

Combine equal volumes of LATAPOXY 310 Stone Adhesive Part A and Part B (1:1 mix ratio by volume). Mix until uniform in color; no swirls. Small quantities can be mixed with a putty knife or margin trowel. Larger quantities can be mixed with an electric drill mixer (low speed). Cartridge packs are designed for use only with the LATAPOXY 310 Cordless Mixer.

Application

Apply dabs evenly distributed on back of the stone or tile; 5 dabs minimum, 1 in each corner and 1 in center. Cover at least 10% of the area of each piece. Finished dab thickness must be a minimum of 1/8" (3 mm), maximum of 1" (25 mm).

Approximate Dab Diameter Required to Achieve 10% Coverage With 5 Dabs:

| Tile Size | Dab Diameter |
|-----------------------------|--------------|
| 12" x 12" (300 mm X 300 mm) | 2" (50 mm) |
| 24" x 24" (600 mm X 600 mm) | 4" (100 mm) |
| 36" x 36" (900 mm X 900 mm) | 6" (150 mm) |

After installation of LATAPOXY 310 Stone Adhesive onto the veneer, install onto substrate and adjust for plumb and level.

Joint Treatment

Exterior Applications:

Use LATASIL™ to treat all joints. Refer to Data Sheet 6200.1 for further instructions.

Interior Applications:

The following products may be used:

- SPECTRALOCK® PRO Premium Grout
- SPECTRALOCK PRO Grout
- 1500 Sanded Grout or 1600 Unsanded Grout mixed with 1776 Grout Enhancer
- LATASIL
- PERMACOLOR® Grout^A
- PERMACOLOR Select

Test area to ensure proper filling as narrow veneers and wider gaps behind the veneer may not allow for joint filling with an epoxy or cement grout.

Note: Control, expansion or other movement of joints must be treated with a flexible sealant.

Cleaning

Clean tools and work while epoxy is fresh, using warm water. Detergent or soap can be added to the water for easier cleaning.

6. AVAILABILITY AND COST

Availability

LATICRETE® and LATAPOXY materials are available worldwide.

For Distributor Information, call:

Toll Free: 1.800.243.4788
Telephone: +1.203.393.0010

For on-line Distributor information, visit LATICRETE at www.laticrete.com.

Cost

Contact a LATICRETE Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM

DS 230.13: LATICRETE® Product Warranty (United States and Canada)

A component of:

DS 025.0APD: LATICRETE 25 Year Tile & Stone System Warranty (United States and Canada)

DS 025.0SPD: LATICRETE 25 Year Tile & Stone System Warranty (United States and Canada)

8. MAINTENANCE

LATICRETE and LATAPOXY® grouts require routine cleaning with a neutral pH soap and water. All other LATICRETE and LATAPOXY materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

All stone and tile should be maintained and sealed with LATICRETE STONETECH® professional products as appropriate for the specific tile/stone and installation situation.

9. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the LATICRETE Technical Service Hotline:

Toll Free: 1.800.243.4788, ext. 235

Telephone: +1.203.393.0010, ext. 235

Fax: +1.203.393.1948

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at www.laticrete.com.

10. FILING SYSTEM

Additional product information is available on our website at www.laticrete.com. The following is a list of related documents:

DS 230.13: LATICRETE Product Warranty (United States and Canada)

DS 025.0APD: LATICRETE 25 Year Tile & Stone System Warranty (United States and Canada)

DS 025.0SPD: LATICRETE 25 Year Tile & Stone System Warranty (United States and Canada)

DS 250.0: PERMACOLOR® Grout[†]

DS 281.0: PERMACOLOR Select

DS 256.0: 1500 Sanded Grout

DS 258.0: 1600 Unsanded Grout

DS 265.0: 1776 Grout Enhancer

DS 679.3: LATAPOXY 310 Rapid Stone Adhesive

DS 681.0: SPECTRALOCK® PRO Premium Grout[†]

DS 683.0: LATAPOXY 310 Cordless Mixer

DS 685.0: SPECTRALOCK PRO Grout[†]

DS 6200.1: LATASIL™

[†] United States Invention Patent No.: 6881768 (and other Patents).

[^] United States Invention Patent No.: 6784229 (and other Patents)

LATICRETE International, Inc.

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