



317 Mortar

DS-317.0-1017

**Globally Proven
Construction Solutions**



1. PRODUCT NAME

317 Mortar

2. MANUFACTURER

LATICRETE International, Inc.

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3. PRODUCT DESCRIPTION

317 Mortar is a bagged cementitious powder. It is mixed with either water or latex admixture for installing ceramic tile and stone using the thin-set method of installation. 317 Mortar must be fortified with 333 Super Flexible Additive or 3701 Mortar Admix for exterior use, porcelain, mosaic, glass and stone tiles, and heavy traffic areas.

Uses

Designed for floors and walls, interior and exterior applications.

Advantages

- Excellent non-sag formula for wall applications
- Smooth, easy to trowel formula
- Dual purpose, for walls and floors

Suitable Substrates

- Concrete
- Cement mortar beds
- Gypsum wallboard*
- Exterior glue plywood**
- Ceramic tile and stone***
- Cement backer board****
- Concrete masonry
- Cement plaster
- Brick masonry
- Cement terrazzo

* Interior Use Only

** When mixed with 333 Super Flexible Additive. Interior use only.

*** When mixed with 3701 Mortar Admix or 333 Super Flexible Additive.

**** Consult cement backer board manufacturer for specific installation recommendations and to verify acceptability for exterior use.

Packaging

50 lb (22.7 kg) bag; 56 bags per pallet

Colors: Grey & White.

Coverage

Approximately 75–90 ft² (7.0–8.4 m²) per 50 lb (22.7 kg.) bag with 1/4" x 1/4" (6 mm x 6 mm) square notch trowel.

Approximately 55–65 ft² (5.1–6 m²) per 50 lb (22.7 kg.) bag with 1/4" x 3/8" (6 mm x 9 mm) square notch trowel.

Shelf Life

Advanced plastic bag provides two (2) year shelf life (non-rapid versions only).

^^ High humidity will reduce the shelf life of bagged product.

Limitations

- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- For light-colored marble or stone, use 317 Mortar in white.
- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not designed as replacements for waterproofing membranes. When a waterproofing barrier is required, use a Waterproofing Membrane (see Section 10 FILING SYSTEM).
- For exterior use, fortify with 333 Super Flexible Additive or 3701 Mortar Admix.
- DO NOT bond to particle board, luan, Masonite® or hardwood surfaces.
- For installations in submerged applications, mix with 3701 Mortar Admix. Wait 14 days after the final grouting period before filing water features with water at 70°F (21°C).

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 where L=span length (except where local building codes specify more stringent deflection requirements)

Cautions

Consult MSDS for more safety information.

- Protect finished work from traffic or damage by other trades for an extended period of time during cold weather conditions. At room temperature conditions (70°F [21°C]) protect overnight.
- Contains portland cement and silica sand. May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water.
- DO NOT take internally. Silica sand may cause cancer or serious lung problems. Avoid breathing dust. Wear a respirator in dusty areas.
- Use a white mortar for white and light colored marble and stone.
- Use LATAPOXY® 300 Adhesive for installing green marble, water sensitive stone and agglomerates and resin backed tiles and stones. (Refer to Data Sheet 633.0).
- Keep out of reach of children.

4. TECHNICAL DATA

VOC/LEED Product Information



This product has been certified for Low Chemical Emissions (ULCOM/GG UL2818) under the UL GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes and Furnishings (UL 2818 Standard) by UL Environment.

Total VOC Content pounds/gallon (grams/liter) of product in unused form is 0.00 lb/gal (0.00 g/l).



This product has a cradle-to-gate (with options) Product-Specific (Type III) Environmental Product Declaration. The PCR review, life cycle assessment and declaration were independently verified by UL Environment in accordance with ISO 14025, ISO 14040 and ISO 14044.

Applicable Standards

ANSI A118.1

Performance Properties

317 Mortar when mixed with water

Test	Test Method	Results	Specification
28 day Cure Porcelain Tile Shear Strength	ANSI A118.1 5.2.4	175–220 psi (1.2–1.5 MPa)	>150 psi (1.0 MPa)
Shear Bond Porcelain Tile Water Immersion		100–200 psi (0.69–1.37 MPa)	>100 psi (0.69 MPa)
7 day Cure Porcelain Tile Shear Strength	ANSI A118.1 5.2.2	150–200 psi (1.0–1.37 MPa)	>150 psi (1.0 MPa)

From report on NAP245

Working Properties

317 Mortar when mixed with water (70°F [21°C])

Open Time	60 minutes
Pot Life	4 hours
Time to Heavy Traffic	24 hours
Wet Density	108 lbs/ft ³ (1732 kg/m ³)

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.

5. INSTALLATION

Surface Preparation

All surfaces should be between 40°F (4°C) and 90°F (32°C) and structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds. Rough or uneven concrete surfaces should be made smooth with Latex Portland Cement Underlayment to provide a wood float (or better) finish. Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface. New concrete slabs shall be damp cured and 28 days old before application.

Note: Latex portland cement mortars do not require a minimum cure time for concrete slabs. All slabs must be plumb and true to within 1/4" (6 mm) in 10 ft (3 m). 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.

1. Installer must verify that deflection under all live, dead and impact loads of interior plywood floors does not exceed industry standards of L/360 for ceramic tile and brick or L/480 for stone installations where L=span length.

2. Minimum construction for interior plywood floors.

SUBFLOOR: 5/8" (15 mm) thick exterior glue plywood, either plain with all sheet edges blocked or tongue and groove, over bridged joints spaced 16" (400 mm) o.c. maximum; fasten plywood 6" (150 mm) o.c. along sheet ends and 8" (200 mm) o.c. along intermediate supports with 8d ring-shank, coated or hot dip galvanized nails (or screws); allow 1/8" (3 mm) between sheet ends and 1/4" (6 mm) between sheets edges; all sheet ends must be supported by a framing member; glue sheets to joints with construction adhesive.

UNDERLAYMENT: 5/8" (15 mm) thick exterior glue plywood fastened 6" (150 mm) o.c. along sheet ends and 8" (200 mm) o.c. in the panel field (both directions) with 8d ring-shank, coated or hot dip galvanized nails (or screws); allow 1/8" (3 mm) to 1/4" (6 mm) between sheets and 1/4" (6 mm) between sheet edges and any abutting surfaces; offset underlayment joints from joints in subfloor and stagger joints between sheet ends; glue underlayment to subfloor with construction adhesive. Refer to Technical Data Sheet 152 "Bonding Ceramic Tile, Stone or Brick Over Wood Floors" for complete details.

Mixing

Place clean, potable water or a latex admix into a clean pail. Add 317 Mortar. Use approximately 1.5 — 1.75 gallons (5.7—6.6 ℓ) of water for 50 lbs (22.7 kg) of powder.

Note: For improved bond strength, flexibility and for exterior installations use 3701 Mortar Admix. For interior installations to plywood use 333 Super Flexible Additive. For rapid “Open to Traffic” installations use 101 Rapid Latex Admix. Mix by hand or with a slow speed mixer to a smooth, trowelable consistency. Allow mortar to slake for 5–10 minutes. Adjust consistency if necessary. Remix and apply with the proper sized notched trowel.

Application

Apply mortar to the substrate with the flat side of the trowel, pressing firmly to work into surface. Comb on additional mortar with the notched side.

Note: Use the proper sized notched trowel to ensure full bedding of the tile. Spread as much mortar as can be covered with tile in 15–20 minutes. Back butter large tiles > 8" x 8" (> 200 mm x 200 mm) to provide full bedding and firm support. Place tiles into wet, sticky mortar and beat in using a beating block and rubber mallet to embed tile and adjust level. Check mortar for complete coverage by periodically removing a tile and inspecting bedding mortar transfer onto back of tile. If mortar is skinned over (not sticky), remove and replace with fresh mortar.

Grouting

Grout installation after a minimum of 24 hours curing time at 70°F (21°C). Grout with SPECTRALOCK® PRO Premium Grout†, SPECTRALOCK PRO Grout†, PERMACOLOR® Grout^ mixed with water or 1500 Sanded Grout or 1600 Unsanded Grout gauged with 1776 Grout Enhancer or with water.

Cleaning

Clean tools and tile work with water while mortar is fresh.

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

A component of:

DS 230.05APD: 5 Year Tile & Stone System Warranty

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.

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
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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
DS 230.05APD: 5 Year Tile & Stone System Warranty
DS 231.0: 3701 Mortar Admix
DS 236.0: 9235 Waterproofing Membrane
DS 250.0: PERMACOLOR Grout^
DS 256.0: 1500 Sanded Grout
DS 258.0: 1600 Unsanded Grout
DS 264.0: 101 Rapid Latex Admix
DS 265.0: 1776 Grout Enhancer
DS 266.0: 333 Super Flexible Additive
DS 633.0: LATAPOXY 300 Adhesive
DS 663.0: HYDRO BAN®
DS 681.0: SPECTRALOCK PRO Premium Grout†
DS 685.0: SPECTRALOCK PRO Grout†
TDS 152: “Bonding Ceramic Tile, Stone or Brick Over Wood Floors”

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

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