



9235 Waterproofing Membrane

DS-236.0-0310



1. PRODUCT NAME

LATICRETE® 9235 Waterproofing Membrane

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

LATICRETE 9235 Waterproofing Membrane is a thin, load-bearing waterproofing designed specifically for the special requirements of ceramic tile, stone and brick installations. A self-curing liquid rubber polymer and a reinforcing fabric are quickly applied to form a flexible, seamless waterproofing membrane that bonds to a wide variety of substrates.

Uses

- Swimming pools, fountains & water features
- Shower pans, stalls and tub surrounds
- Bathrooms & laundries (industrial, commercial & residential)
- Spas and hot tubs
- Kitchens & Food Processing Areas
- Terraces & balconies over unoccupied spaces
- Countertops
- Facades
- Steam rooms (when used in conjunction with a vapor barrier)

Advantages

- Inhibits stain causing mold and mildew growth in the substrate with Microban® antimicrobial product protection
- Safe—no solvents and non-flammable

- Interior and exterior use
- Vertical and horizontal surfaces (including ceilings)
- Thin—only 0.02" (0.5 mm) thick when cured
- Anti-fracture protection of up to 1/8" (3 mm) over shrinkage and other non-structural cracks
- “Extra Heavy Service” rating per TCNA performance levels (RE: ASTM C627 Robinson Floor Test).
- IAPMO and ICC Approval
- Applies quickly with a paint brush or roller—no special mixing or application equipment needed
- Fast cure—normally ready in hours for finishes
- Install tile, brick and stone directly onto membrane
- Certified Children and Schools by The GREENGUARD Institute
- Easy cleanup—just use water while fresh
- Protects concrete & reinforcing steel from corrosion

Suitable Substrates

- Concrete
- Cement Mortar Beds
- Cement Plaster
- Concrete and Brick Masonry
- Exterior Glue Plywood*
- Gypsum Wallboard*
- Ceramic Tile and Stone**
- Cement Terrazzo**
- Cement Backer Board***

* Interior Applications Only;

** If skim coated with a LATICRETE® Latex Thin-Set Mortar;

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

Packaging

Full Unit: (36 Full Units/pallet) consisting of:

- 1 x 6 gal (23 l) pail liquid
- 1 x 300 ft² (28 m²) roll fabric 38" (965 mm wide)
- 1 x 75 ft (23 m) long roll fabric 6" (150 mm wide)

Mini Unit:

- 1 x 2 gal (7.6 l) jug liquid;
- 2 x 6" x 75' (15 cm x 23 m) roll fabric

Color: Black

Approximate Coverage

- Full Unit: 300 ft² (27.8 m²)
- Mini Unit: 75 ft² (7 m²)

Shelf Life

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

Limitations

- Do not use as a primary roofing membrane over occupied space
- Use LATAPOXY® 300 Adhesive for installing green marble or water sensitive stone, resin-backed stone or tile and agglomerates.
- Do not use over expansion joints, structural cracks or cracks with vertical differential movement
- Do not use over cracks >1/8" (3 mm) in width
- Do not use as a vapor barrier (especially in steam rooms)
- Not for use directly over particle board, luan, Masonite®, or hardwood floors.
- Use white mortar for white or light-colored marble or stone.
- Do not expose unprotected membrane to sun or weather for >30 days
- Do not expose to negative hydrostatic pressure, excessive vapor transmission, rubber solvents or ketones
- Must be covered with ceramic tile, stone, brick, concrete, screeds, terrazzo or other traffic-bearing course. Use protection board for temporary cover.
- Obtain approval by local building code authority before using product in shower pan applications.
- Do not install directly over single layer wood floors, plywood tubs/showers/ fountains or similar constructs

Cautions

Consult MSDS for more safety information.

- Surface temperature must be >45°F (7°C) during installation and for 24 hours thereafter
- Protect from traffic or water until fully cured
- Allow membrane to cure fully (typically 7 days @ 70°F/21°C) before flood testing; flood test prior to applying tile or stone
- Cold weather will require a longer cure time

4. TECHNICAL DATA

VOC/LEED Product Information



This product has been GREENGUARD Indoor Air Quality Certified® by the GREENGUARD Environmental Institute under the GREENGUARD Standard for Low Emitting Products in finished form.

Total VOC Content pounds/gallon (grams/liter) of product in unused form is 0.02 lb /gal (2.39 g/l).

Applicable Standards

- ANSI A118.10
- ANSI A118.12
- Germany Tile Association (ZDB) 02–1988
- FHA4900.1 Section 615.5
- Federal Specification TT-C–00555

Approvals

- ICC Evaluation Service Report ESR–1058
- IAPMO/Uniform Plumbing Code File No. 3524 (shower pan liner)
- Michigan State Construction Code Commission Certificate of Acceptability No. 1234 P–A
- Oregon Building Codes Agency Ruling No. 92–12P
- Allegheny County Plumbing Advisory Board Article XV
- Los Angeles Board of Building And Safety Commissioners Approval M–980031
- City of Orlando—Certificate of Acceptability

- Singapore Institute of Standards and Industrial Research
- GREENGUARD

PHYSICAL PROPERTIES		
Physical Property	Test Method	LATICRETE® 9235 Waterproofing Membrane
Fungus Resistance	ANSI A118.10 (M–4.1)	Pass
Seam Strength	ANSI A118.10 (M–4.2)	>95 lbs/inch width (>166.4 N/cm width)
Breaking Strength	ANSI A118.10 (M–4.3)	2400 lbs/in² (16.5 MPa)
Dimensional Stability	ANSI A118.10 (M–4.4)	No Change
Waterproofness	ANSI A118.10 (M–4.5)	Pass
Shear Strength	ANSI A118.10 (M–5.6)	280 lbs/in² (1.9 MPa)
System Performance	ANSI A118.10 (M–6); ASTM C627; TCA Rating*	Cycles 1–14 "EXTRA HEAVY"
Water Permeance	Fed. Spec. TT-C–00555 (Mod.)	Excellent (E)
Water Vapor Transmission	ASTM E96–80 (Inverted Water Method)	2.4 grains/h•ft² (1.6 g/h•m²)
Water Vapor Permeance	ASTM E96–80 (Inverted Water Method)	2.9 perms (165.5 ng/Pa•s•m²)
Elongation	ASTM D751–89	20–30%
Hydrostatic Resistance	ASTM D751 (Modified)	120 lbs/in² (827.4 kPa)
Thickness (+/-)	LIL 1013–92	0.02" (0.5 mm)
Chemical Resistance	Full Immersion 90 day	Brine Solution NA Sugar Solution NA Milk NA 10% Citric Acid NA 3.5% HCl Acid NA 5% Acetic Acid NA 1% Alkali NA Toluol Softens Urine NA CaCl2 NA
Service Temperature	LIL 1016–92	-20°–280°F (-29°–138°C)
Crack Suppression	ANSI A118.12.5.4	Pass 1/8" (3 mm)

* Tile Council of America Service Rating Categories

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

The following overview provides basic installation information. Refer to Data Sheet WPAF.5 (included in unit) for complete instructions or visit www.laticrete.com.

Surface Preparation

Surface temperature must be 45–90°F (7–32°C) during application and for 24 hours after installation. All substrates must be structurally sound, clean and free of dirt, oil, grease, paint, laitance, efflorescence, concrete sealers or curing compounds. Make rough or uneven concrete smooth to a wood float or better finish with a LATICRETE® Underlayment. Do not level with gypsum or asphalt based products. Maximum deviation in plane must not exceed 1/4" in 10 ft (6 mm in 3 m) with no more than 1/16" in 1 ft (1.5 mm in 0.3 m) variation between high spots. Dampen hot, dry surfaces and sweep off excess water—installation may be made on a damp surface. New concrete slabs shall be damp cured and a minimum of 14 days old before application. Maximum amount of moisture in the concrete substrate should not exceed 5 lbs./1000 square feet (2.26 kg/92.9 m²) 24 hrs. per ASTM F-1869 or 75% relative humidity as measured with moisture probes.

- 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 "Requirements for Direct Bonding of Ceramic or Stone Tiles Over Wood Floors" for complete details.

Pre-Treat Cracks & Joints

Apply a liberal coat^{^^} of LATICRETE[®] 9235 Waterproofing Membrane Liquid approximately 8" (200 mm) wide over substrate cracks, cold joints, control joints and board joints using a paint brush or roller (heavy napped roller cover). Place 6" (150 mm) wide LATICRETE Waterproofing/Anti-Fracture Fabric into the wet LATICRETE 9235 Waterproofing Membrane Liquid. Press down on LATICRETE Waterproofing/Anti-Fracture Fabric with brush or roller until the LATICRETE 9235 Waterproofing Membrane Liquid "bleeds" through from below. Then apply another liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid over the entire surface of the LATICRETE Waterproofing/Anti-Fracture Fabric.

Pre-Treat Coves, Corners & Seams

Apply a liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid approximately 8" (200 mm) wide over substrate coves, corners, seams, joints and changes in plane using a paint brush or roller (heavy napped roller cover). Fold 6" (15 cm) wide LATICRETE Waterproofing/Anti-Fracture Fabric in half and place it into the coat^{^^} of wet LATICRETE 9235 Waterproofing Membrane Liquid. Flash LATICRETE Waterproofing/Anti-Fracture Fabric 3" (75 mm) up walls and other vertical surfaces. Press down on LATICRETE Waterproofing/Anti-Fracture Fabric with brush or roller until the LATICRETE 9235 Waterproofing Membrane Liquid "bleeds" through from below. Then apply another liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid over the entire surface of the LATICRETE Waterproofing/Anti-Fracture Fabric.

Pre-Treat Drains

Drains must be of the clamping ring type, with weepers and as per ASME A112.6.3. Cut a square of LATICRETE Waterproofing/Anti-Fracture Fabric approximately 38" x 38" (965 mm x 965 mm). In the center of the LATICRETE Waterproofing/Anti-Fracture Fabric square, cut a hole that matches the diameter of the drain throat as closely as possible. Apply a liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid around and over the bottom half of drain clamping ring. Center the circular cutout over the drain throat and imbed the LATICRETE Waterproofing/Anti-Fracture Fabric square into the LATICRETE 9235 Waterproofing Membrane Liquid, encircling the drain throat as closely as possible. Cover with a second coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid. When dry, apply a LATICRETE Latasil™ bead where the LATICRETE Waterproofing/Anti-Fracture Fabric square cutout meets the drain throat. Install top half of drain clamping ring.

Pre-Treat Penetrations

Pack any gaps around pipes, lights or other penetrations with a compressible backer rod and LATICRETE Latasil. Apply a liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid around penetration opening. Imbed pieces of 6" (150 mm) wide LATICRETE Waterproofing/Anti-Fracture Fabric into LATICRETE 9235 Waterproofing Membrane Liquid. Cover with a second coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid. When dry, seal flashing with LATICRETE Latasil.

Main Application

Allow any pre-treated areas to dry to the touch. Apply a liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid with brush or roller over substrate including pre-treated areas. Lay LATICRETE Waterproofing/Anti-Fracture Fabric into wet LATICRETE 9235 Waterproofing Membrane Liquid and smooth out any wrinkles. Press LATICRETE Waterproofing/Anti-Fracture Fabric with brush or roller until LATICRETE 9235 Waterproofing Membrane Liquid "bleeds" through to surface. Lap seams approximately 2" (50 mm). Flash LATICRETE 9235 Waterproofing Membrane up over pre-treated coves and corners, so such areas have two layers of LATICRETE Waterproofing/Anti-Fracture Fabric. Apply another liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid over LATICRETE Waterproofing/Anti-Fracture Fabric to saturate it. Let topcoat dry to the touch, approximately 1–3 hours @ 70°F (21°C) and 50% RH. Make another liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid to seal entire surface. When last coat has dried to the touch, inspect final surface for pinholes, voids, thin spots or other defects. Use additional LATICRETE 9235 Waterproofing Membrane Liquid to seal defects.

Interior CBU and Gypsum Wallboard

LATICRETE 9235 Waterproofing Membrane Reinforcing Fabric and the third coat of LATICRETE 9235 Waterproofing Membrane Liquid may be omitted from main applications over interior walls and other vertical surfaces made with cementitious backer units (CBU) or gypsum wallboard. However, coves, corners, seams and board joints must be pre-treated as described above.

Expansion Joints

Apply a liberal coat^{^^} of LATICRETE 9235 Waterproofing Membrane Liquid around and down into substrate expansion joints. Loop 6" (150 mm) wide LATICRETE 9235 Waterproofing Membrane Reinforcing Fabric down into joint. Cover with a second layer of LATICRETE 9235 Waterproofing Membrane Liquid^{^^}.

[^] Refer to Limitations section for unacceptable cracks;

^{^^} Wet coat thickness is 20 mils, 0.02", 0.5 mm; use wet film gauge to check thickness; consumption per coat is ~0.01 gal/ft² (~0.4 l/m²); coverage per coat is ~100 ft²/gal (~2.5 m²/l);

Protection

Provide protection for newly installed membrane, even if covered with a thin bed ceramic tile, stone or brick installation, against exposure to rain or other water for a minimum of 5 days @ 70°F (21°C) and 50% RH.

Flood Testing

Allow membrane to cure fully before flood testing, typically 7 days @ 70°F (21°C) and 50% RH. Cold and/or wet conditions will require a longer curing time. For more information for flood testing requirements and procedures refer to TDS 169 "Flood Testing Procedures" found at www.laticrete.com

Installing Finishes

Once LATICRETE 9235 Waterproofing Membrane has dried to the touch, ceramic tile, stone or brick may be installed by the thin bed method with a LATICRETE Latex Thin-Set Mortar. Allow LATICRETE 9235 Waterproofing Membrane to cure 7 days

at 70°F (21°C) and 50% RH before covering with concrete, thick bed mortar, screeds, toppings, coatings, epoxy adhesives, terrazzo or moisture sensitive resilient or wood flooring. DO NOT use solvent-based adhesives directly on LATICRETE® 9235 Waterproofing Membrane.

Drains & Penetrations

Allow for a minimum 1/4" (6 mm) space between drains, pipes, lights or other penetrations and surrounding ceramic tile, stone or brick. Use LATICRETE Latasil™ and foam backer rod to seal space—do not use a grout or joint filler mortar.

Control Joints

Ceramic tile, stone and brick installations must include sealant filled joints over any control joints in the substrate. However, the sealant filled joints can be offset horizontally, by as much as one tile width from the substrate control joint location, to coincide with the grout joint pattern.

Expansion Joints

Ceramic tile, stone and brick installations must include expansion joints at coves, corners, other changes in substrate plane and over any expansion joints in the substrate. Expansion joints in ceramic tile, stone or brickwork are also required at perimeters, at restraining surfaces, at penetrations and at the intervals described in Tile Council of North America, Inc. (TCNA) Handbook Installation Method EJ171. Use LATICRETE Latasil and backer rod.

Cleaning

While wet, LATICRETE 9235 Waterproofing Membrane Liquid can be washed from tools with water.

6. AVAILABILITY AND COST

Availability

LATICRETE and LATAPOXY® materials are available worldwide. For distributor information:

Toll Free: 1.800.243.4788
Telephone: +1.203.393.0010
Internet: www.laticrete.com

Cost

Contact a LATICRETE/LATAPOXY Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM

DS 230.13: LATICRETE Product Warranty

A component of:

DS 230.05: LATICRETE 5 Year System Warranty
DS 230.15: LATICRETE 10 Year System Warranty
(For Steel or Wood Framed Exterior Facades)
DS 025.0: LATICRETE 25 Year System Warranty
DS 230.99: LATICRETE Lifetime 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:

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
DS 230.05: LATICRETE 5 Year System Warranty
DS 230.15: LATICRETE 10 Year System Warranty
(For Steel or Wood Framed Exterior Facades)
DS 025.0: LATICRETE 25 Year System Warranty
DS 230.99: LATICRETE Lifetime System Warranty
DS WPAF.5: LATICRETE Membrane Instructions
DS 6200.1: LATICRETE Latasil
DS 633.0: LATAPOXY 300 Adhesive
TDS 152: Bonding Ceramic Tile, Stone or Brick Over Wood Floors
TDS 169: "Flood Testing Procedures"
TDS 189: LATICRETE 9235 Waterproofing Membrane Checklist

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