HYDRO BARRIER™ Plus

DS-36640-0726

Globally Proven Construction Solutions

1. PRODUCT NAME
HYDRO BARRIER™ Plus

2. MANUFACTURER
LATICRETE International, Inc.
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3. PRODUCT DESCRIPTION
HYDRO BARRIER Plus is a thin, load-bearing, self-curing, liquid rubber polymer easily applied to form a flexible, seamless waterproofing, anti-fracture membrane that no longer requires the use of waterproofing fabric, when applied in coves and corners. Apply membrane and flood test the same day as soon as 12 hours^ after final cure.
Equipped with antimicrobial product protection.

Uses
- Interior and exterior
- Swimming pools, fountains and water features
- Shower pans, stalls and tub surrounds
- Industrial, commercial and residential bathrooms and laundries
- Kitchens and food processing areas
- Terraces and balconies over unoccupied spaces
- Countertops and facades

Advantages
- Allows for flood testing in 12 hours^
- No Fabric needed
- Thin; only 0.020–0.030" (0.5–0.8 mm) thick when cured
- Changes in color from a light blue to darker blue 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)
- Exceeds ANSI A118.10 and A118.12
- IAPMO approved
- Equipped with anti-microbial technology to protect the treated article.
- Fast curing; allows foot traffic in 4–6 hours @ 70°F (21°C), 50% RH^
- Lighter color for ease of inspection
- Safe—non-flammable
- Install tile, brick and stone directly onto membrane

^When cured at 70 F (21 C) or higher and 50% RH. Lower temperatures and higher RH will require longer cure times.

Suitable Substrates
- Concrete
- Concrete and Brick Masonry
- Cement Mortar Bed
- Cement Plaster
- Exterior Glue Plywood (Interior Only)
- Cement Terrazzo
- Cement Backer Board
- Poured Gypsum Underlayment
- Gypsum Plaster (Interior use only, non-wet areas)
- HYDRO BAN Board (Consult product datasheet (DS 040.0) for specific installation recommendations)
- Gypsum Wallboard (Interior use only, non-wet areas)

Packaging
5 Gal (19 L) pail liquid (36 full units/pallet)
3.5 Gal (13.3 L) pail liquid (48 full units/pallet)
4 x 1 Gal(3.8 L) pails of liquid packed in a carton (30 cartons/pallet)

Approximate Coverage
5 Gal: 250 ft^2 (23.2 m^2)
***3.5 Gal*:** 175 ft^2 (16.2 m^2)
***1 Gal*:** 50 ft^2 (4.6 m^2)

Shelf Life
Factory sealed containers of this product are guaranteed to be of first quality for two (2) years if stored off the ground in a dry area.

Limitations
- DO NOT bond to OSB, particle board, luan, Masonite® or hardwood surfaces.
- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for waterproofing membranes. When a waterproofing membrane is required, use HYDRO BARRIER Plus.
- When using HYDRO BARRIER Plus, fabric is not required
- DO NOT use as a primary roofing membrane over occupied space. For more information in installation of tile over wood decks, or, over occupied or finished spaces please refer to TDS 157 “Exterior Installation of Tile and Stone Over Occupied Space.”
- DO NOT use over dynamic expansion joints, structural cracks or cracks with vertical differential movement (See HYDRO BARRIER Plus Installation Instructions, DS-1216, for complete instructions).
- DO NOT use over cracks >1/8" (3 mm) in width.
- DO NOT use as a vapor barrier (especially in steam rooms).
- DO NOT expose unprotected membrane to sun or weather for more than 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 finish. Use protection board for temporary cover.
- Obtain approval by local building code authority before using product in shower pan applications.
- Follow all applicable building codes having jurisdiction.
- DO NOT install directly over single layer wood floors, plywood tubs/showers/fountains or similar constructs.
- Not for use beneath cement or other plaster finishes. Consult with plaster manufacturer for their recommendations when waterproofing membrane is required under plaster finishes.
- Not for use under self-leveling underlayments or decorative wear 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 where L=span length.

Cautions
- Consult SDS for safety information.
- Allow membrane to cure fully (typically 12 hours @ 70°F (21°C) and 50% RH before flood testing); flood test prior to applying tile or stone.
- Maximum amount of moisture in the concrete/mortar bed substrate should not exceed 5 lbs/1,000 ft^2 (283 µg/s • m^2) per ASTM F-1869 or 75% relative humidity as measured with moisture probes.
- During cold weather, protect finished work from traffic until fully cured.
- For white and light-colored marbles, use a white thin set mortar.
- For green and moisture sensitive marble, agglomerates and resin backed tile and stone use LATAPOXY® 300 Adhesive (refer to Data Sheet 633.0).
- Allow wet mortars/ plasters (deck mud consistency) to cure for 72 hours at 70°F (21°C) prior to installing HYDRO BARRIER Plus.
- For temperatures between 45–69°F (7–21°C) allow 3 days prior to flood testing.
- Protect from exposure to traffic or water until fully cured.

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.

Applicable Standard
- ANSI A118.10
- ANSI A118.12

Physical Properties

Physical Property	Test Method	HYDRO BARRIER™ Plus
7-day Hydrostatic Test	ANSI A118.10	Pass
7-day Tensile Strength	ANSI A118.10	250–300 psi (1.8–2.1 MPa)
7-day Water Immersion	ANSI A118.10	90–120 psi (0.6–0.83 MPa)
7-day Shear Bond	ANSI A118.10	200–250 psi (1.4–1.7 MPa)
28-day Shear Strength	ANSI A118.10	210–340 psi (1.5–2.3 MPa)
System Crack Resistance Test	ANSI A118.12 5.4	Pass (High)
Thickness (Dry)		20–30 mils (0.5–0.8 mm)

The data in the above table shall be used by the Project Design Professional to determine suitability, placement, building code conformance and over-all construct appropriateness of a given installation assembly.

Working Properties
HYDRO BARRIER™ Plus can be applied using a paint brush, roller, trowel or airless sprayer. All areas must have two coats to ensure waterproofing capabilities. When the second coat is applied the substrate will not show through HYDRO BARRIER Plus if coated with 0.020–0.030" (0.5–0.8 mm) of dried membrane. Color changes from a light blue to darker blue when fully cured.

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**
  Surface temperature must be 50–90°F (10–32°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 an underlayment. 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.

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.

SUB FLOOR: 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.

Bonding to TCNA Compliant Poured Gypsum Underlayment
Poured gypsum-based underlayments must meet TCNA requirements for compressive strength and the performance requirements of ASTM C627 for the anticipated service level designated by the design professional. Poured gypsum underlayment thickness and application varies, consult the manufacturer for specific recommendations. The underlayment must be dry and properly cured following the manufacturer's recommendations to achieve a permanent installation. Surfaces to be covered must be clean, structurally sound and meet the maximum allowable deflection standard of L/360 for ceramic tile and L/480 for stone under total anticipated load. Expansion joints must be installed in accordance with ANSI/TCNA guidelines. Prime all surfaces to receive HYDRO BARRIER™ Plus with properly applied manufacturer's sealer or with a primer coat of HYDRO BARRIER Plus, consisting of 1 part HYDRO BARRIER Plus diluted with 4 parts clean, cool tap water. In a clean pail, mix at low speed to obtain a homogeneous solution. The primer can be brushed, rolled or sprayed to achieve an even coat. Apply the primer coat to the floor at a rate of 250 to 300 ft^2/gallon (6.1 to 7.5 m^2/L) of diluted HYDRO BARRIER Plus. Allow the primer coat to dry completely (approximately 24 hrs., depending on substrate and air temperature and humidity). When dry apply two full coats of HYDRO BARRIER Plus to the primed area following the guidelines in this data sheet and DS-1216 HYDRO BARRIER Plus Installation Instructions.

Pre-Treat Cracks & Joints
Fill all substrate cracks, cold joints, and control joints to a smooth finish using a Latex Fortified Thin-Set. Alternatively, a liberal coat^^ of HYDRO BARRIER Plus applied with a paint brush or trowel may be used to fill in nonstructural joints and cracks less than 1/8" (3 mm). When using HYDRO BARRIER Plus fabric is not required when it is being used as a full field coating for crack isolation and is an option when chasing existing cracks. Any crack above a 1/8" can be filled with thin-set and allowed to cure prior to the application of HYDRO BARRIER Plus . As an alternative method apply a liberal coat^^ of HYDRO BARRIER Plus approximately 8" (200 mm) wide over substrate cracks, cold joints, and control joints using a paint brush or roller (heavy napped roller cover). After the first coat has dried to the touch, install a second liberal coat^^ of HYDRO BARRIER Plus over the first coat.

Pre-Treat Coves and Floor/Wall Transitions
Fill all substrate coves and floor/wall transitions to a smooth finish and changes in plane using a latex fortified thin-set mortar. A liberal coat^^ of HYDRO BARRIER Plus with a paint brush or trowel may be used to fill in cove joints and floor/wall transitions <1/8" (3 mm). Apply a liberal coat^^ of HYDRO BARRIER Plus approximately 8" (200 mm) wide over substrate coves and floor/wall transitions using a paint brush or roller (heavy napped roller cover). After the first coat has dried to the touch, install a second liberal coat^^ of HYDRO BARRIER Plus over the first coat.

Pre-Treat Drains
Drains must be of the bonding flange or clamping ring type, with weepers and as per ASME A112.6.3. Apply a liberal coat^^ of HYDRO BARRIER Plus Waterproofing Membrane liquid around and over the bonding flange or

bottom half of drain clamping ring. After the first coat has dried to the touch, install a second liberal coat^^ of HYDRO BARRIER Plus over the first coat. When dry, apply a LATASIL™ bead where the HYDRO BARRIER Plus meets the drain throat. Install top half of drain clamping ring.

Pre-Treat Penetrations
Allow for a minimum 1/8" (3 mm) space between drains, pipes, lights or other penetrations and surrounding ceramic tile, stone or brick. Pack any gaps around pipes, lights or other penetrations with a fortified thin-set mortar. Apply a liberal coat^^ of HYDRO BARRIER Plus liquid around penetration opening. After the first coat has dried to the touch, install a second liberal coat^^ of HYDRO BARRIER Plus over the first coat. Bring HYDRO BARRIER Plus up to level of tile or stone. When dry, seal flashing with LATASIL.

Crack Isolation (Partial Coverage) Crack suppression must be applied a minimum of 3 times the width of the tile or stone being installed. The tile installed over the crack cannot be in contact with the concrete.

Follow TCNA Method F125 for the treatment of hairline cracks, shrinkage cracks, and saw cut or control joints: Apply a liberal coat^^ of HYDRO BARRIER Plus to a minimum of three (3) times the width of the tile using a paint roller or paint brush and allow to dry. After the first coat has dried to the touch, install a second liberal coat^^ of HYDRO BARRIER Plus over the first coat.

As an alternative; Apply a liberal coat^^ of HYDRO BARRIER Plus liquid, 3 times the width of the tile over the crack using a paint roller or paint brush and immediately apply the 6” (150 mm) wide Waterproofing/Anti-Fracture Fabric into the wet liquid over the crack. Press firmly with brush or roller to allow complete “bleed through” of liquid. Immediately apply another liberal coat^^ of HYDRO BARRIER Plus liquid over the fabric and allow to dry. When the first treatment has dried, apply a liberal coat^^ of HYDRO BARRIER Plus over the first wide coat, using a paint roller or paint brush, and allow to dry. Treat closest joint to the crack, saw cut, or cold joint in the tile or stone installation with LATASIL.

Main Application
Allow any pre-treated areas to dry to the touch. Apply a liberal coat^^ of HYDRO BARRIER Plus with brush or roller over substrate including pre-treated areas. Apply another liberal coat^^ of HYDRO BARRIER Plus over the first coat of HYDRO BARRIER Plus. Let topcoat dry to the touch, approximately 1–3 hours at 70°F (21°C) and 50% RH. When last coat has dried to the touch, inspect final surface for pinholes, voids, thin spots or other defects. HYDRO BARRIER Plus will dry to darker blue color when fully cured. Use additional HYDRO BARRIER Plus to seal defects.

Movement Joints
See HYDRO BARRIER Plus Installation Instructions 105.5.

Note: Apply a liberal coat^^ of HYDRO BARRIER Plus, approximately 8" (200 mm) wide over the areas. Then top coat with a second coat^^ of HYDRO BARRIER Plus.

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 24 hours at 70°F (21°C) and 50% RH.

Flood Testing
Allow membrane to cure fully before flood testing, typically 12 hours at 70°F (21°C) and 50% RH. Cold and/or wet conditions will require a longer curing time. For temperatures 45–69°F (7–21°C) allow 3 days prior to flood testing.

Installing Finishes
Once LATICRETE HYDRO BARRIER™ Plus has dried to the touch, ceramic tile, stone or brick may be installed by the thin bed method with a Thin-Set Mortar. Allow HYDRO BARRIER Plus to cure 12 hours 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 HYDRO BARRIER Plus.

Drains & Penetrations
Use LATASIL™ and foam backer rod to seal space between drain or penetration and finish. 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.

Movement Joints
Ceramic tile, stone and brick installations must include expansion 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 the Tile Council of North America, Inc. (TCNA) Handbook Installation Method EJ171. Use LATASIL and backer rod.

Spray Application of HYDRO BARRIER™ Plus
Follow all installation and surface preparation requirements outlined in this document and DS 105.5 and TDS 410. The sprayer being used for the application of HYDRO BARRIER Plus should be capable of

producing a maximum of 3300 psi (22.8 MPa) with a flow rate of 0.95 to 1.6 GPM (3.6 to 6.0 LPM) using a 0.521 or a 0.631 reversible tip. Keep the unit filled with HYDRO BARRIER Plus to ensure continuous application of liquid. The hose length should not exceed 100' (30 m) in length and 3/8" (9 mm) in diameter. Apply a continuous HYDRO BARRIER Plus film^^ with an overlapping spray. The wet film has a light blue appearance and dries to a darker blue color. When the first coat has dried to a uniform darker blue color, approximately 45 to 90 minutes at 70°F (21°C), visually inspect the coating for any voids or pinholes. Fill any defects with additional material and apply the second coat^^ at right angles to the first. The wet film thickness should be checked periodically using a wet film gauge. The combined dried coating should be 0.020–0.030 inches (0.5–0.8 mm) thick.

Check application thickness with a wet film gauge periodically as the HYDRO BARRIER Plus is being dispensed to ensure that the appropriate thickness and coverage is achieved. Bounce back and over-spray will consume more product. To achieve the required performance the coating must be free from pinholes and air bubbles. Do not back roll the spray applied coating. Allow the HYDRO BARRIER Plus to cure in accordance with the instructions in this document, DS 1216 and TDS 410 prior to the installation of the tile or stone finish. It is important to note that areas not scheduled to receive the HYDRO BARRIER Plus should be taped off and protected from any potential over-spray. Expansion and movement joints should be honored and treated as outlined in this document, DS 1216and TDS 410.

Cleaning
While wet, HYDRO BARRIER Plus can be washed from tools with water.

^^Wet Coat Thickness is 15-22 mils, 0.015"-0.022" (0.4-0.6 mm); consumption per coat is ~0.01 gal/ft² (~0.4 l/m²); coverage per coat is ~100 ft²/gal (~2.5 m²/l). Use a wet film thickness gauge to check thickness.

6. AVAILABILITY AND COST

Availability
LATICRETE 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 **laticrete.com**

Cost
Contact a LATICRETE Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM:
- 10 Year System Warranty (US) (English)
- 5 Year System Warranty (US) (English)
- 1 Year Product Warranty (US) (English)

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. 1235
Telephone: +1.203.393.0010, ext. 1235
Fax: +1.203.393.1948

Technical and Safety Literature
To acquire technical and safety literature, please visit our website at **laticrete.com**.

10. FILING SYSTEM

Additional product information is available on our website at 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 230.10: LATICRETE 10 Year System Warranty
- DS 1216: HYDRO BARRIER™ Plus Installation Instructions
- DS 633.0: LATAPOXY® 300 Adhesive
- DS 6200.1: LATASIL™
- TDS 152: “Bonding Ceramic Tile, Stone or Brick Over Wood Floors”
- TDS 157: “Exterior Installation of Tile and Stone Over Occupied Space.”

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