



HYDRO BAN[®] Sheet Membrane

DS-41-0824

**Globally Proven
Construction Solutions**



1. PRODUCT NAME

HYDRO BAN[®] Sheet Membrane

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

HYDRO BAN Sheet Membrane is a waterproof sheet membrane that is installed using a substrate appropriate LATICRETE[®] thin-set. Due to its polymeric construction, HYDRO BAN Sheet Membrane can also be used as a vapor barrier/waterproofing membrane for steam room and steam shower applications. Available in rolls, tapes, corners and collars, HYDRO BAN Sheet Membrane allows for a quick, easy waterproofing installation, which will retain its integrity for the life of the installation.

Uses

- Interior applications
- Showers or tub surrounds
- Steam rooms and steam showers
- Bathrooms
- Commercial and residential kitchens
- Backsplashes
- Walls and floors
- Wet areas

Advantages

- ANSI A118.10 - Exceeds all requirements
- ASTM E96/E96M Procedure E-0.06 Perms - approved for steam showers / rooms as single membrane
- IAPMO approved
- Pliable – conforms easily to substrate
- Complete line of accessories – single source supply
- Allows for installation over green mortar beds
- Installs with modified or unmodified thin-set†
- Compatible with HYDRO BAN products++
- † Refer to requirements for specific substrate to which the HYDRO BAN[®] Sheet Membrane will be bonded
- ++When using HYDRO BAN liquid applied waterproofing membrane in conjunction with HYDRO BAN Sheet Membrane be sure to overlap the HYDRO BAN liquid onto the HYDRO BAN Sheet Membrane by 2" (50mm). Apply HYDRO BAN liquid in two coats insuring the first coat dries to a uniform olive green color before the second coat is applied.

Suitable Substrates (Interior Use Only)

- Concrete
- Concrete Masonry
- Brick Masonry
- Cement Mortar Bed
- Cement Plaster
- Gypsum Wallboard
- Exterior Glue Plywood (Interior Only)
- Ceramic Tile and Stone
- Ceramic Tile and Stone
- Cement Terrazzo
- Cement Backer Board
- Poured Gypsum Underlayment

Packaging

See Packaging and Approximate Coverage Table

Approximate Coverage

HYDRO BAN® Sheet Membrane	
3'3"x33'=108 ft ² (1m x 10m =10m ²)	120 rolls per pallet
3'3"x98'5"=323 ft ² (1m x 30m =30m ²)	38 rolls per pallet
HYDRO BAN Sheet Membrane Sealing Tape	
5"x16'5" (125mm x 5m)	1 roll per bag 12 bags per carton
5"x98'5" (125mm x 30m)	1 roll per box
7.25"x16'5" (185mm x 5m)	1 roll per bag 12 bags per carton
7.25"x98'5" (185mm x 30m)	1 roll per box
HYDRO BAN Sheet Membrane Corners	
Inside Corners	2 per bag 12 bags per carton
Outside Corners	2 per bag 12 bags per carton
HYDRO BAN Sheet Membrane Collars	
3/4" (20mm) Pipe Collar	1 per bag 12 bags per carton
4 1/2" (114mm) Mixing Valve Collar	1 per bag 12 bags per carton

- 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

- Protect finished work from traffic until fully cured.
- For white and light-colored marbles, use a white LATICRETE® Latex Portland Cement Thin Set Mortar.
- Use care not to damage HYDRO BAN Sheet Membrane prior to installation of tile or stone finishes. Cover with protection board to protect from foot traffic and other trades when installing on horizontal surfaces.
- Wait a minimum of 24 hours after the installation before flood testing in order to allow the thin-set to fully cure and insure the integrity of all seams.

4. TECHNICAL DATA

Applicable Standard

- ASTM E96/E96M
- Meets or exceeds ANSI A118.10 specifications

Limitations

- DO NOT bond to particle board, luan, OSB, interior glue plywood, Masonite® or hardwood surfaces.
- Do not use as a primary roofing membrane over occupied space. For more information on 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.
- HYDRO BAN® Sheet Membrane is not recommended for submerged applications. For these applications, use HYDRO BAN waterproofing membrane.
- Do not use over existing cracks.
- Do not expose to negative hydrostatic pressure, rubber solvents or ketones.
- Must be covered with ceramic tile, stone, brick, screeds, terrazzo, or other traffic-bearing finish. Use protection board for temporary cover.
- 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.

Physical Properties

Physical Property	Test Method	HYDRO BAN Sheet Membrane
Seam Strength	ASTM D 751	32.7 lbs/in. (0.6kg/mm)
Breaking Strength Transverse	ASTM D 751 Procedure B	1298 psi (9.0 MPa)
Breaking Strength Longitudinal	ASTM D 751 Procedure B	1867 psi (12.9 MPa)
Waterproofness	ASTM D 4068	Pass
7-Day Dry Shear Strength	ASTM C482	175 psi (1.2 MPa)
7-Day Water Immersion Shear Strength	ASTM C482	107 psi (0.7 MPa)
4-Week Shear Strength	ASTM C482	103 psi (0.7 MPa)
12-Week Shear Strength	ASTM C482	105 psi (0.7 MPa)
100-Day Water Immersion Shear Strength	ASTM C482	113 psi (0.8 MPa)
Permeance	ASTM E96 Procedure E	0.06 Perm (inch-lb)
Water Vapor Transmission	ASTM E96 Procedure E	0.104 grain/hr-ft ²
Service Requirement	ASTM C627	Rated Extra Heavy (TCNA)
Resistance to Temperature: min./max.		-22°F / +194°F (-30°C / + 90°C)
Total Thickness (approximate)	Physical measurement	20-30 mils (0.5-0.7 mm)

Working Properties

HYDRO BAN Sheet Membrane products are constructed of two outer layers of non-woven polypropylene and one inner layer of polyethylene. This three layer membrane when properly installed will protect tile installations from moisture migration and minor substrate cracking.

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 a suitable 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.

1. Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. 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 and L/600 for all exterior veneer applications 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 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.

Treat Cracks & Joints

Fill all substrate cracks, cold joints, and control joints to a smooth finish using a LATICRETE® polymer fortified thin-set.

Application

- Measure and cut all of the HYDRO BAN® Sheet Membrane sections and HYDRO BAN Sheet Membrane Sealing Tape strips to the proper size before mixing the substrate appropriate LATICRETE thin-set.
- Mix the LATICRETE thin-set to a fairly wet consistency but still able to hold a notch. Dampen excessively dry porous surfaces in order to prevent premature drying and skinning of the thin-set. If skinning does occur remove thin-set and reapply using fresh mortar.

- To create the watertight system, the installation process will rely on the layering of components; start with the corners: Apply thin-set mortar with a ¼"x 3/16" (6 mm x 5 mm) V-notched trowel. Press the HYDRO BAN Sheet Membrane Corners firmly into the thin-set. Remove any trapped air and guarantee full adhesion to the material by spreading the thin-set from the inside of the corner out using a trowel or straightedge with rounded corners.
 - Continue with thin-set along the floor-to-wall transition from the corner outward for the first strip of HYDRO BAN Sheet Membrane Sealing Tape. Overlap the corners by 2" (50 mm).
 - Lay the tape and remove all air pockets and excess material as with the corner piece.
 - For any sections where two strips of HYDRO BAN Sheet Membrane Sealing Tape will be joined, be certain to overlap the material by 2" (50 mm).
 - Continue with these steps around the perimeter of the installation.
 - Treat the vertical corners with the HYDRO BAN Sheet Membrane Sealing Tape next in the same manner as the floor-to-wall transitions were
 - installed. Overlap the corners by 2" (50 mm).
 - Treat pipe penetrations and mixing valves by applying thin-set mortar with a ¼"x 3/16" (6 mm x 5 mm) V-notched trowel. Slide the appropriate HYDRO BAN Sheet Membrane Pipe Collar over the pipe or mixing valve and press firmly into the thin-set. The urethane rubber will seal around the pipe or mixing valve. Remove any trapped air and guarantee full adhesion to the material by spreading the thin-set from the inside out using a trowel or straightedge with rounded corners.
 - Important, there should not be excessive overlapping. For example, at the corner, the HYDRO BAN® Sealing Tape should overlap the HYDRO BAN Sheet Membrane Corner but not the adjacent HYDRO BAN Sheet Membrane Sealing Tape.
 - Continue the same method to install the first HYDRO BAN Sheet Membrane section on the wall. Start in the completed corner and work your way out from the corner to the edge of the installation. Apply the thin-set to the surface of the wall with the ¼"x 3/16" (6 mm x 5 mm) V-notched trowel. If the surface is uneven, use a square-notched trowel with a wider tooth up to 3/8" (9 mm). Be sure to comb all of the thin-set in the same direction.
 - Install the first length of sheet membrane. It may be easiest to unroll it up the wall or in the direction that you combed the thin-set. Remember to overlap the membrane by a minimum of 2" (5 cm). Be certain to leave at least ¼" (6mm) of space from the floor.
 - Smooth the section of HYDRO BAN Sheet Membrane with a flat trowel or roller from the middle towards the outside edges to assure that no air is trapped underneath. Follow the direction that the thin-set was combed onto the substrate.
 - Use short, firm strokes to press out all of the excess thin-set and trapped air. Carefully remove or spread the excess thin-set over the seams.
 - Apply the thin-set for the next length of HYDRO BAN Sheet Membrane section. Roll the next length upwards; smoothing it as it is pressed into the thin-set.
 - If a bulge or crease appears during the unrolling, it is OK. Simply peel the section carefully away from the wall and reapply it so that it is flat. The sections should always be well pressed; the use of a roller is recommended but this can also be accomplished with a flat trowel.
 - Squeeze out any extra thin-set at the seams; remove the excess or spread it uniformly down the seam.
 - The remaining lengths can now be installed in this same manner.
 - Best practice; sections of HYDRO BAN Sheet Membrane should be butt-jointed and the seam between the HYDRO BAN Sheet Membrane sections should be covered with HYDRO BAN Sheet Membrane Sealing Tape installed with the appropriate thin-set. Make sure that the HYDRO BAN Sheet Membrane Sealing Tape overlaps each HYDRO BAN Sheet Membrane section by a minimum of 2" (5 cm). The floor should be the last section installed.
 - NOTE: Sections of HYDRO BAN® Sheet Membrane may also be shingled (overlapped) during installation without the need for HYDRO BAN Sheet Membrane Sealing Tape. The top section must overlap a minimum of 2" (5cm) onto the bottom section of HYDRO BAN Sheet Membrane.
 - If the HYDRO BAN Sheet Membrane is damaged after installation apply a patch of HYDRO BAN Sheet Membrane installed with the appropriate thin-set. The patch must overlap the damaged area by a minimum of 2" (5 cm).
 - Tiling can begin immediately after installation when a flood test is not required.
- Clamping Ring Drains**
- When installing HYDRO BAN Sheet Membrane with a clamping ring type drains with weepers as per ASME A112.6.3, lay the HYDRO BAN Sheet Membrane over the top of the drain and cut an x where each bolt will penetrate the membrane. Cut a hole in the membrane to allow the drain grate to be threaded into the clamping ring. (Use of a fabric circle cutter is recommended).
 - Install the HYDRO BAN Sheet Membrane, making sure to align the previously cut holes for the bolts and drain throat. Ensure that the weep holes are not blocked.
 - Apply bead of LATASIL™ to the clamping body just outside of the bolts, place clamping ring into position and tighten bolts. Check to make sure that weep holes are not plugged by any material.
- HYDRO BAN® Bonding Flange Drains**
- Follow the instructions in DS 035.0 for the installation of the HYDRO BAN® Bonding Flange Drain in either a bonded or unbonded mortar bed. When the mortar is cured enough to walk on the HYDRO BAN Sheet Membrane can then be installed.
- Install the HYDRO BAN Sheet Membrane over the mortar bed and the HYDRO BAN Bonding

Flange using 253 Gold or 254 Platinum thin-sets. Insure that the HYDRO BAN Sheet Membrane extends to the first 90° radius of the HYDRO BAN Bonding Flange Drain.

Apply thin-set mortar with a 1/4" x 3/16" (6mm x 5mm)

V-notched trowel. Press the HYDRO BAN Sheet Membrane firmly into the adhesive. Remove any trapped air and guarantee full adhesion to the material by spreading the adhesive from the inside out using a trowel or straightedge with rounded corners.

The adjusting ring is installed with a polymer fortified thin-set when installing the tile in order to line up the grate with the tile.

HYDRO BAN Linear Drains

- Follow the instructions in DS 034.0 for the installation of the HYDRO BAN Linear Drain in either a bonded or unbonded mortar bed. When the mortar is cured enough to walk on the HYDRO BAN Sheet Membrane can then be installed.
- Install the HYDRO BAN Sheet Membrane over the mortar bed and the HYDRO BAN Linear Drain flange using 253 Gold or 254 Platinum thin-sets. Insure that the HYDRO BAN Sheet Membrane extends to the first 90° radius of the HYDRO BAN Linear Drain channel.
- Apply thin-set mortar with a 1/4"x3/16" (6 mm x 5 mm) V-notched trowel. Press the HYDRO BAN Sheet Membrane firmly into the adhesive. Remove any trapped air and guarantee full adhesion to the material by spreading the adhesive from the inside out using a trowel or straightedge with rounded corners.

Flood Testing

Allow adhesive to cure fully before flood testing, a minimum of 24 hours after final cure at 70°F (21°C) and 50% RH. Cold and/or wet conditions will require a longer curing time.

Control Joints

Ceramic tile, stone and brick installations must include sealant filled joints between the ceramic tile, stone of brick which is 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 thin 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 the Tile Council of North America, Inc. (TCNA) Handbook Installation Method EJ171. Use LATASIL™ and backer rod.

Cleaning

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

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:

- 25 Year System Warranty (US) (English)
- 10 Year System Warranty (US) (English)
- 1 Year Product Warranty (US) (English)
- LATICRETE Lifetime System Warranty (US) (English)

8. MAINTENANCE

Non-finish LATICRETE and LATAPOXY installation 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 230.10: LATICRETE 10 Year System Warranty (United States & Canada)
- DS 025.0: LATICRETE 25 Year System Warranty (United States and Canada)
- DS 230.99: LATICRETE Lifetime System Warranty (United States and Canada)

LATICRETE International, Inc.

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- DS 677.0: 254 Platinum
- DS 663.0: HYDRO BAN
- DS 6200.1: LATASIL
- DS 035.0: HYDRO BAN Bonding Flange Drain
- DS 034.0: HYDRO BAN Linear Drain
- TDS 157: Exterior Installation of Tile and Stone Over Occupied Space