



# LATICRETE® Hydro Ban® Installation Instructions for Australia

TDS 1003

All waterproofing work for wet areas within residential buildings in Australia shall conform to AS3740 – 2010. This standard gives the minimum requirements for materials, design and installation as referenced in the Building Code of Australia. Waterproofing work for areas other than “wet area work” within residential buildings will also benefit from guidelines as set out in AS3704 – 2010 although other methods of construction may be equally satisfactory when they deliver equal performance and outcomes.

## SUITABLE SUBSTRATES

1. Cement Mortar – thick bed, plasters, renders and skim coats both internal and external applications.
2. Existing Ceramic Tile, Stone or Cement Terrazzo – should be prepared, clean, sound, well adhered ceramic tile, glass mosaic, stone or cement terrazzo – applied with a 3 mm skim coat of LATICRETE® latex thin-set mortar. For both internal and external application.
3. Masonry – Brick and Cement Block. Should be clean and sound. For both internal and external application.
4. Cement Backer Board – Should be clean and sound. For both internal and external application. Verify acceptability of board to be used externally with board manufacturer.
5. Exterior Glue Plywood and Gypsum Wallboard – Do not use for continuously immersed application. For interior applications only.
6. Metal and PVC – PVC, copper, steel or stainless steel metal surfaces must be cleaned of oil, grease, rust and other potential bond breakers and must be abraded with sandpaper or wire brush just prior to application. For application when attaching to flashings or plumbing fixtures only.

## SUBSTRATE CONDITIONS

1. Surfaces must be structurally sound, stable and rigid enough to support ceramic tile, stone, 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.
2. Maximum deviation in plane is not to exceed 5 mm in 3 m with no more than 1.5 mm in 0.3 m variation measured from high points.
3. Concrete or mortar beds shall be wood floated or lightly steel trowelled. Burnished or highly polished surfaces should be scarified to produce an unglazed lightly textured surface. Weak or chalky surfaces should be removed to present a clean, sound open pored surface.
4. Maximum amount of moisture in the concrete mortar bed substrate should not exceed  $283 \mu\text{g}/\text{m}^2/24 \text{ hrs}$  per ASTM F-1869 or 75% relative humidity as measured with moisture probes. Consult with finish material manufacturer or supplier to determine the maximum allowable moisture content for substrates under their finished material.
5. Surfaces should be between  $7^\circ\text{C}$  and  $32^\circ\text{C}$ .
6. Provide adequate slope to drains; between 1:60 – 1:80 fall within shower areas and 1:80 – 1:100 in other wet areas as per Appendix C, AS3740-2010.
7. Concrete and masonry must be free of curing agents, sealers, water repellents or other treatments that prevent membrane bonding.
8. Refer to TDS1001 for installing LATICRETE Hydro Ban® over rough surfaces.
9. **Note:** Do not bond to particle board, flake board, oriented strand board (OSB), Luan, yellow pine, pressure/chemically treated wood, Masonite® or hardwood.

## SUBSTRATE PREPARATION

1. Remove dust, airborne contaminants, salt, dirt, oil, grease, paint, laitance, efflorescence, curing compounds, sealers, water repellents and other materials that prevents bond. Metal plumbing fixtures must be clean of oil, grease, rust and other potential bond breakers and must be abraded with sandpaper or wire brush.
2. Dampen hot, dry surfaces and sweep off excess water – membrane can be installed over a damp surface.
3. Use LATICRETE 3701 Fortified Mortar Bed; or LATICRETE 226 Thick Bed Mortar gauged with LATICRETE 3701 Mortar Admix; or a LATICRETE latex underlayment, to patch, pitch, level, plumb or smooth substrates. Do not use gypsum or asphalt underlayments.
4. Existing ceramic/stone tile, glazed CMU or cement terrazzo must be cleaned and skim coated with approximately 3 mm of LATICRETE® 335 Premium Flexible Adhesive or other suitable LATICRETE latex thin-set mortar.

5. In “Wet Area” works within residential buildings, class 1, 2, 3 or 4 as referenced in the BCA and AS3740-2004: a 12 mm bond breaker shall be installed to all wall/floor junctions, hob/wall junctions and movement joints where the membrane is bonded to the substrate as per clause 5.11.5 for a class 3 membranes. A “paintable” urethane or silicone sealant may be used for the installation of a 12 mm bond breaker.

## Tools Required

Tape measure, mixing sticks, broom, paint roller with heavy napped roller cover, roller tray, paint brush, box cutter, caulk gun, clean up rags, pail of water and sponge.

## APPLICATION: LATICRETE® Hydro Ban®

### Pre-Treat Cracks\*\*, Cold Joints, Control Joints and Seams (See Illustration 1):

Fill all substrate cracks, cold joints, control joints and seams to a smooth finish using a LATICRETE latex fortified thin-set. Alternatively for all substrate cracks, cold joints, control joints and seams less than 3 mm apply a liberal coat<sup>^</sup> of liquid approximately 200 mm wide over the crack, joint or seam making sure that the crack, joint or seam is completely filled with LATICRETE Hydro Ban® liquid. LATICRETE Hydro Ban can be applied with a paint brush, paint roller (heavy napped roller) or a 5 mm x 4 mm V-notch trowel. When the first coat has cured (completely dried to the dark olive green colour), apply a second liberal coat<sup>^</sup> of LATICRETE Hydro Ban liquid.

### Pre-Treat “Wet Area Work” Corners and Wall/Floor Transitions Within Residential Buildings:

For “Wet Area Work” within residential buildings, class 1, 2, 3 or 4 as referenced in the BCA and AS3740-2010, fill all sheet joints, coves, corners, wall/floor junctions and hob/wall junctions to a smooth finish using a LATICRETE latex fortified thin-set. A 12 mm bond breaker shall then be installed to all wall/floor junctions and hob/wall junctions where the membrane is bonded to the substrate with an approved “paintable” urethane or “paintable” silicone sealant. When the sealant has skinned and can withstand application of the liquid apply a liberal coat<sup>^</sup> of liquid at all treated wall/floor and hob/wall junctions approximately 200 mm wide making sure that the coat<sup>^</sup> is of even thickness and is applied 100 mm up the walls and 100 mm across the floor with a paint brush, paint roller (heavy napped roller) or a 5 mm x 4 mm V-notch trowel. When the first coat has cured (completely dried to the dark olive green colour), apply a second liberal coat<sup>^</sup> of LATICRETE Hydro Ban liquid.

### Pre-Treat Coves, Corners and Wall/Floor Transitions (See Illustration 2 and 4):

Optional method for work other than “Wet Area Work”. Fill all coves, corners and wall/floor transitions to a smooth finish using a LATICRETE latex fortified thin-set. Alternatively, for all coves, corners and wall/floor transitions with a gap of 3 mm or less apply a liberal coat<sup>^</sup> of liquid at coves, corners, seams, joints and changes in substrate plane approximately 200 mm wide making sure that the cove, corner or wall/floor transition is completely filled with LATICRETE Hydro Ban liquid. LATICRETE Hydro Ban can be applied with a paint brush, paint roller (heavy napped roller) or a 5 mm x 4 mm V-notch trowel. When the first coat has cured (completely dried to the dark olive green colour), apply a second liberal coat<sup>^</sup> of LATICRETE Hydro Ban liquid.

On coves, corners and wall/floor transitions greater than 3 mm LATICRETE Reinforcing Fabric can also be used. Fold 150 mm wide reinforcing fabric in half and imbed it into the liquid, flashing fabric 75 mm up walls. Apply second liberal coat<sup>^</sup> of liquid to seal reinforcing fabric. Refer to **INSTALLING FINISHES** section for expansion joint treatment at coves, corners and changes in the substrate plane.

### Pre-Treat Drains:

Membrane to drainage connections maybe made over concrete and other floors. Where termination of the drainage riser has been made at slab or topping level the membrane shall be turned down and finished a minimum of 50 mm into the de-burred, securely fixed riser. Pack any gaps around pipes with a suitable LATICRETE latex-fortified thin-set mortar and allow hardening prior to membrane application. Prepare the approved PVC or metal surface as previously stated just prior to application of the liquid. LATICRETE Hydro Ban can be applied with a paint brush, paint roller (heavy napped roller) or a 5 mm x 4 mm V-notch trowel. When the first coat<sup>^</sup> has cured (completely dried to the dark olive green colour), apply a second liberal coat<sup>^</sup> of LATICRETE Hydro Ban liquid.

Where a drainage flange is installed the membrane shall be applied over the top of the securely fixed flange and be turned down and finished a minimum of 50 mm into the flange body. Prepare the approved PVC or metal surface as previously stated just prior to application of the liquid. LATICRETE Hydro Ban can be applied with a paint brush, paint roller (heavy napped roller) or a 5 mm x 4 mm V-notch trowel. When the first coat<sup>^</sup> has cured (completely dried to the dark olive green colour), apply a second liberal coat<sup>^</sup> of LATICRETE Hydro Ban liquid.

### Pre-Treat Penetrations (See Illustration 7):

Pack any gaps around pipes, lights or other penetrations with a suitable LATICRETE® latex-fortified thin-set mortar and allow to harden (e.g. LATICRETE 335 Premium Flexible Adhesive). Apply a liberal coat<sup>^</sup> of liquid onto and around penetration. As an option, imbed pieces of 150 mm wide LATICRETE Membrane Reinforcing Fabric into liquid. Cover with a liberal coat of liquid<sup>^</sup>. When the first coat has cured (completely dried to the dark olive green colour), cover with a second liberal coat<sup>^</sup> of liquid. If necessary when dry, seal flashing with an approved waterproof sealant. Refer to Detail 5 for information on completing penetrations treatment.

<sup>^</sup> Note 1: wet coat thickness is 0.4 mm – 0.6 mm; use wet film gauge to check thickness; consumption/coat is approximately 0.4 l/m<sup>2</sup>; coverage/coat is approximately 2.5 m<sup>2</sup>/l.

Note: for coverage per unit, refer to information printed LATICRETE® Hydro Ban® liquid container.

## **Main Application – LATICRETE® Hydro Ban® (See Illustration 3 and 5):**

Allow any pre-treated areas to dry to the touch. Apply a liberal coat of liquid<sup>^</sup> with brush or roller over substrate including pre-treated areas. Flash membrane up over pre-treated coves and corners, so such areas have two layers of liquid. Let cure (completely dried to the dark olive green colour), approximately 1 – 2 hours at 21°C and 50% RH. Apply another liberal coat<sup>^</sup> of liquid over entire surface to seal membrane. When last coat has dried to the touch, inspect final surface for pinholes, voids, thin spots or other defects. Use additional liquid to seal defects and allow to cure (completely dried to the dark olive green colour). Coves, corners, seams and board joints must be pre-treated as described above.

## **Protection**

Provide protection for work during installation from extremes in temperature, rain, humidity and wind for at least 2 hours after cure at 21°C and 50% RH. Protection should be increased to 24 hours after cure (completely dried to the dark olive green colour), at temperatures between 10 – 21°C and 50% RH.

Provide protection for newly installed cured membrane when 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 21°C and 50% RH. Longer times will be required for temperatures between 10 – 21°C and 50% RH. Higher temperatures than 21°C will decrease curing times. High substrate moisture content and cold temperatures will extend curing time.

## **Flood Testing**

Allow membrane to cure fully (completely dried to the dark olive green colour), before flood testing. Flood test typically 2 hours after cure at 21°C or above and 50% RH. Cold and/or wet conditions will require a longer curing time. From temperatures between 10 – 21°C allow 24 hours after cure before flood testing. The time prior to flood testing begins when the membrane has dried to a dark olive green colour.

## **INSTALLING FINISHES**

Once 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 membrane to cure 2 hours at 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 membrane.

## **Drains and Penetrations (See Detail 1 & 5):**

Allow for a minimum 6 mm space between drains, pipes, lights or other penetrations and surrounding ceramic tile, stone or brick. Use appropriate waterproof sealant and foam backer rod to seal space – do not use grout, joint filler or thin-set 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. (See Detail 2).

## **Expansion Joints**

Ceramic tile, stone and brick installations must include expansion joints at coves, corners, and other changes in substrate plane and over any expansion joints in the substrate (refer to Details 3 and 4). Expansion joints in the ceramic tile, stone and brick work are also required at perimeters, at restraining surfaces, at penetrations and at the intervals described in Australian Standards AS3958.1 – 2007, Tile Council of North America, Inc. (TCNA) Handbook for Ceramic Tile Installations Method E1171– current year. Use an appropriate foam backer rod and waterproof sealant.

## **LIMITATIONS**

1. Do not install over structural cracks, cracks with vertical movement or cracks with >3 mm horizontal movement.
2. Do not use as a primary roofing membrane over occupied space.
3. Do not use as a vapour barrier. (Steam rooms require the use of a separate vapour barrier layer.)
4. Do not expose to negative hydrostatic pressure, rubber solvents or ketones.
5. Membrane must be covered with ceramic tile, stone, brick, concrete, screeds, terrazzo or other protective surface. For temporary cover, use protection board.

6. Do not expose membrane directly to sun or weather for more than 30 days.
  7. Do not install directly over single layer wood floors, plywood tubs/showers/fountains or similar constructs. For such cases, use LATICRETE® Fortified Mortar Beds; or LATICRETE 226 Thick Bed Mortar gauged with LATICRETE 3701 Mortar Admix over mechanically fastened lath. Install membrane once mortar has hardened.
  8. Allow wet mortars/plasters (deck mud consistency) to cure for 72 hours at 21°C prior to installing LATICRETE Hydro Ban®. Allow a minimum of 2 hours after cure time at 21°C prior to flood testing in these conditions.
  9. For temperatures between 7 – 21°C allow a 72 hour cure time prior to flood testing.
- For more information concerning LATICRETE Hydro Ban please see Data Sheet DS1036
- Visit [www.laticrete.com.au](http://www.laticrete.com.au) for more information.



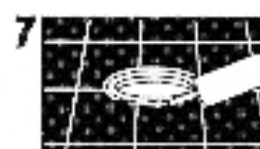
1 Pre-treat cracks



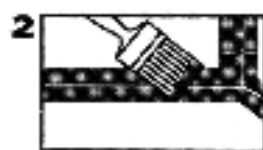
3 First coat – field



5 Second coat – field



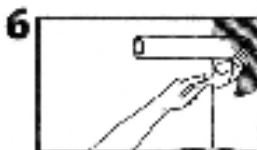
7 Sealant drain(s)



2 Pre-treat coves and corners

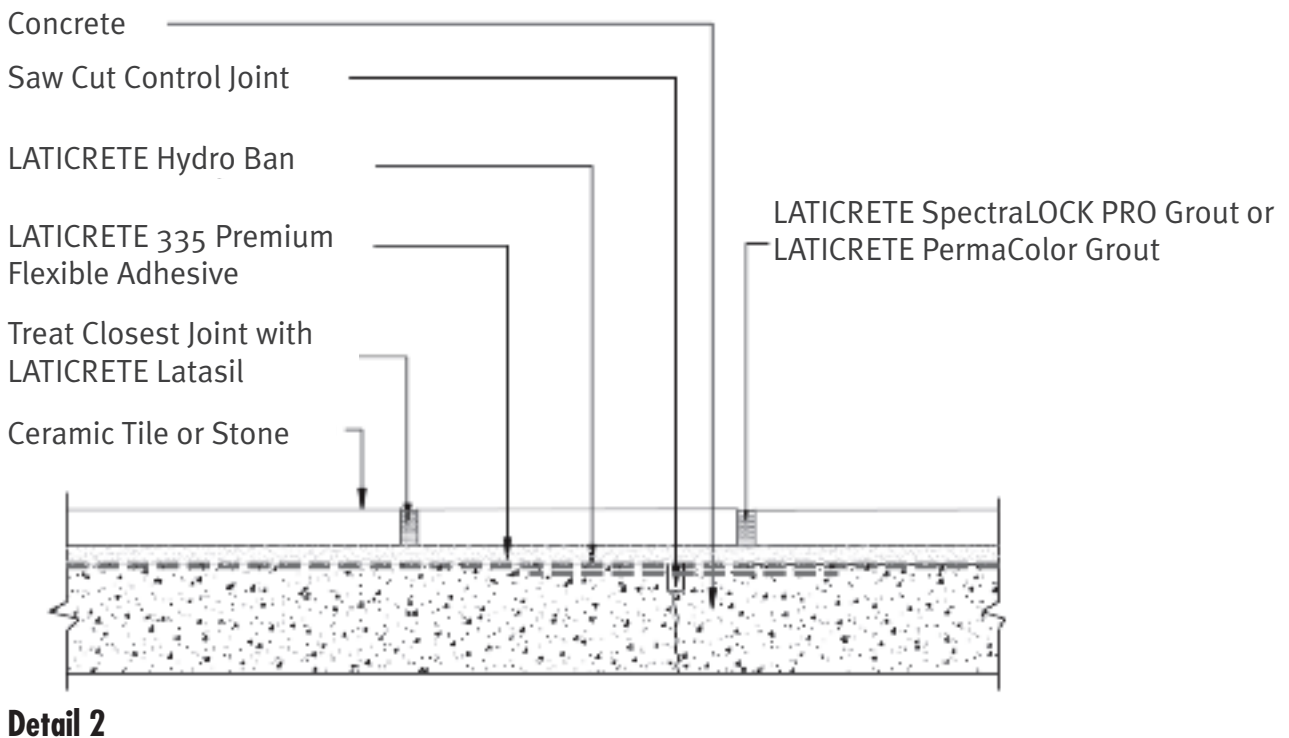
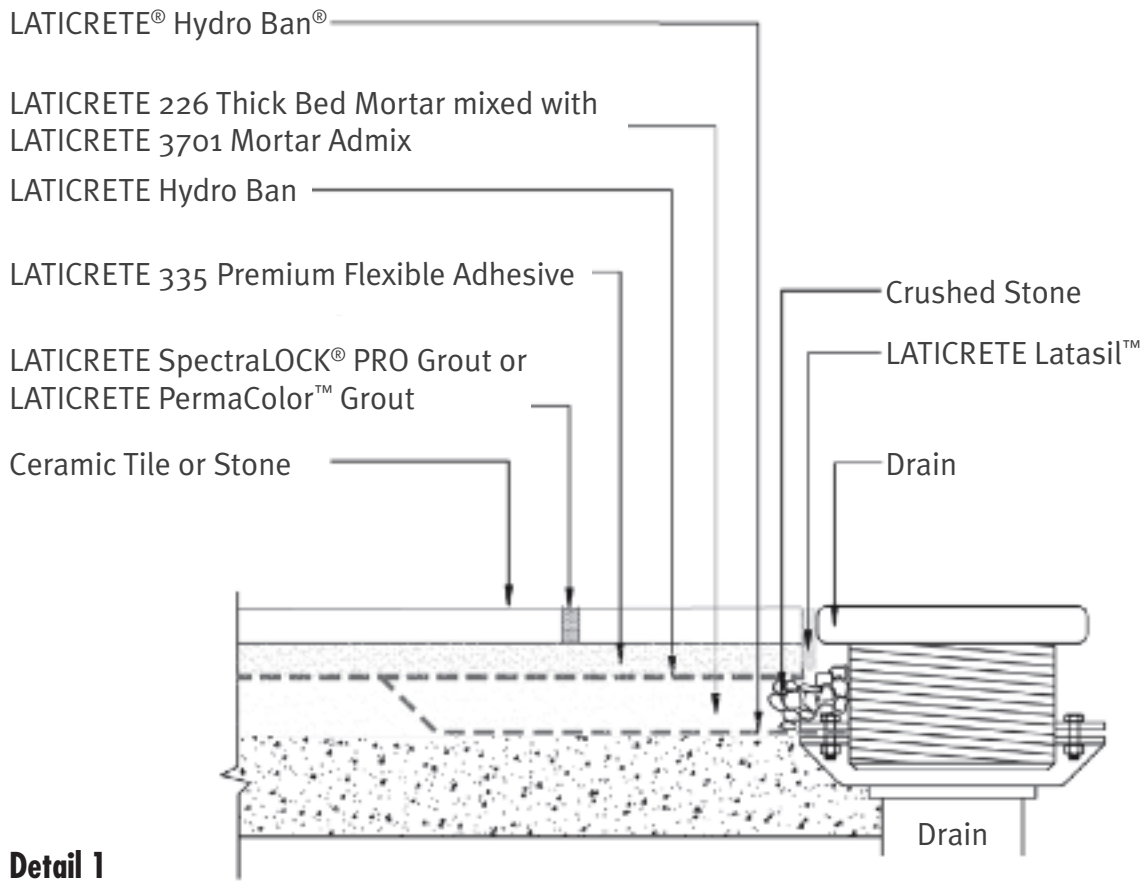


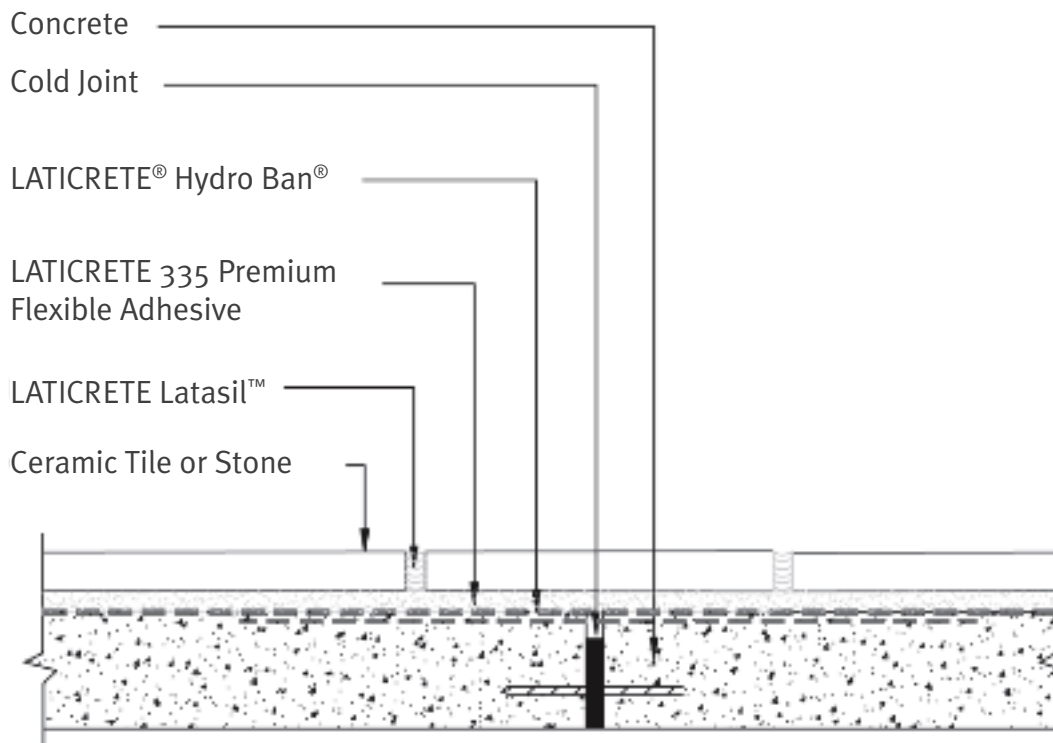
4 Second coat – coves and corners



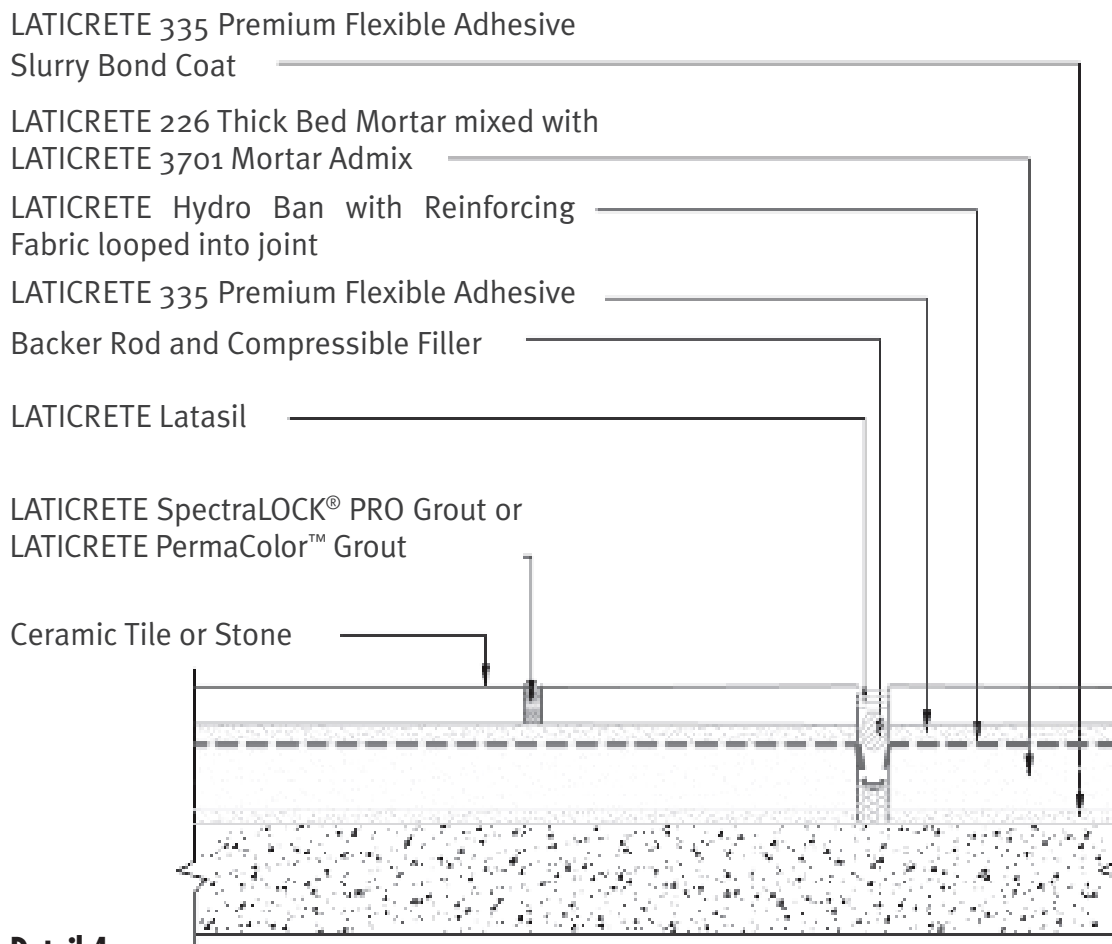
6 Pipe penetration

## Illustrations 1-7



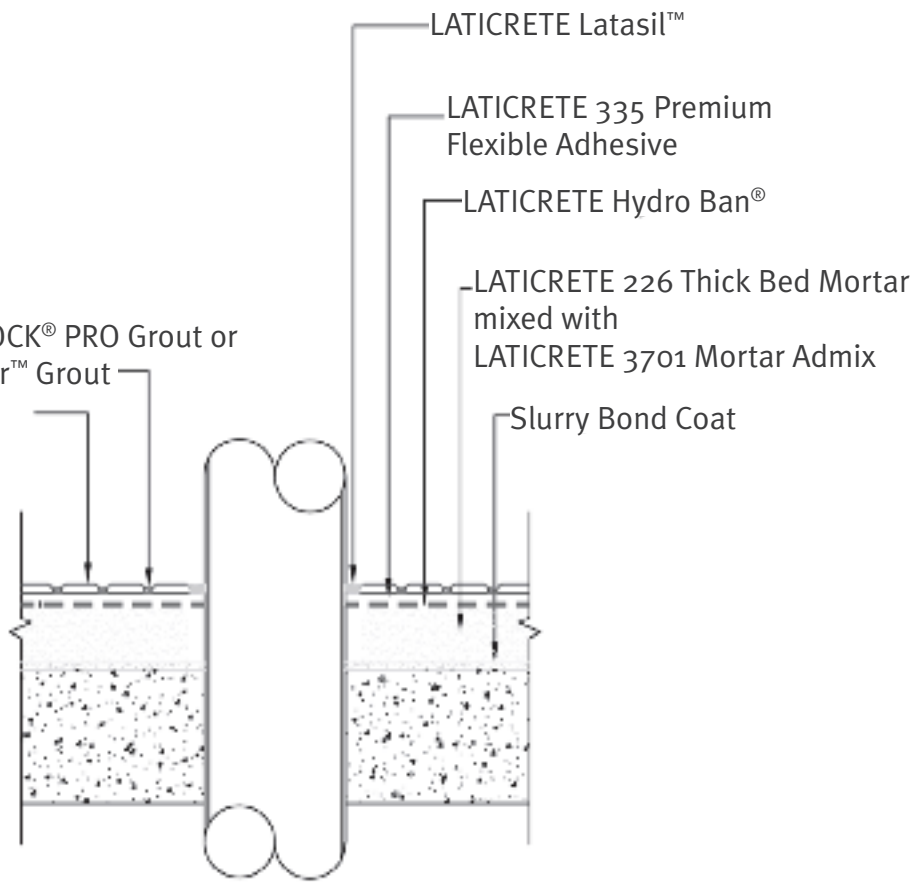


**Detail 3**



**Detail 4**

LATICRETE® SpectraLOCK® PRO Grout or  
LATICRETE PermaColor™ Grout  
Ceramic Tile or Stone



**Detail 5**