For The Builders of A Better World

HYDRO BARRIER™
Installation instructions for Australia
TDS-1025

All waterproofing work for "Domestic Wet Areas" in Australia shall conform to AS3740 -2021 & AS4858-2004 (REC 2020). These standards give the minimum requirements for materials, design and installation as referenced in the National Construction Code (NCC). Waterproofing work for areas other than "Domestic Wet Areas" within residential buildings in Australia may also benefit from guidelines as set out in AS3740 – 2021 & AS4858-2004 (REC 2020) although other methods may be equally satisfactory when they deliver equal or better performance and outcomes. LATICRETE® promotes the collection, redirection and drainage of water and moisture to outlets on tile installations made over membranes, on substrates with fall to outlets.

SUITABLE SUBSTRATES

1. Concrete – (Without crystalline additives, sealers, pore blockers, hydrophobic additives and the like) unformed concrete surfaces that have wood floated or lightly steel trowelled finishes (Concrete Surface Profile CSP 1 – 3) . Formed surfaces that have been processed to expose the fine aggregate and be laitance free.
2. Cement Mortar – (LATICRETE engineered screeds, and non-proprietary mixes ranging from 1:3 – 1:5 of ordinary Portland cement/sand) thick bed screeds, plasters, renders and skim coats.
3. Existing Ceramic Tile, Stone or Cement Terrazzo – Clean, sound, well adhered ceramic tile, glass mosaics, stone, glazed Cement Masonry Unit(CMU)/brick or cement terrazzo must be prepared before the application of a nominal 3 mm skim coat of a LATICRETE latex thin-set adhesive.
4. Masonry – Brick and CMU. Should be clean and sound, apply a nominal 3 mm skim coat of LATICRETE latex thin-set adhesive and trowel to a smooth and flat surface. See TDS-1001.
5. Cement Backer Board – Contact LATICRETE if board has smooth polished surface, has a highly glazed surface, moisture blocking sealers or other coatings.
6. Gypsum Wallboard – Contact LATICRETE if Gypsum Wallboard has moisture blocking sealers on it.
7. Resilient Flooring - Clean, sound, well adhered resilient flooring or high-pressure laminate must be prepared, then apply a nominal 3 mm skim coat of LATICRETE 254 Adhesive.

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/720 for thin bed stone installations where L=span length. See illustration 1.
2. For thin or medium bed tile installations when a cementitious bonding material will be used: including large and heavy format tile adhesive (aka medium bed adhesive): maximum allowable variation in the tile substrate as per AS3958–2023 – for tiles with edges shorter than 375mm, maximum allowable variation is 6mm in 3m from the required plane, with no more than 1.5mm variation in 300mm when measured from the high points in the surface. For tiles with at least one edge 375mm in length or longer, maximum allowable variation is 3mm in 3m from the required plane, with no more than 1.5mm variation in 600mm when measured from the high points in the surface. For modular substrate units, such as drywall substrates or adjacent concrete masonry units, adjacent edges cannot exceed 1mm difference in height.
3. Concrete or mortar beds shall be wood floated or lightly steel trowelled finish. 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 content of the substrate should not exceed 283µg/m^2/24Hrs per ASTM F-1869 or 75% relative humidity as measured with moisture probes per ASTM 2170. Consult with finish material manufacturer or supplier to determine the maximum allowable moisture content for substrates under their finished material. Mitigate substrate moisture with LATAPOXY® Moisture Shield or HYDRO BAN® Slurry.
5. Surfaces should be between 10°C and 32°C.
6. Membranes shall be applied to substrates to fall as per code and good trade practice requirements.
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 Membranes 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 prior to an application of LATAPOXY® Moisture Shield.
2. Clean all surfaces with a damp sponge and /or vacuum. Prior to application of membrane, apply LATICRETE® PRIMER RTU or PRIMER to surfaces.
3. Use LATICRETE® 3701 Fortified Mortar Bed; or LATICRETE 226 Thick Bed Mortar gauged with LATICRETE 3701 Mortar Admix; or a LATICRETE latex thin-set adhesive, to patch, pitch, level, skim, 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 nominally 3mm of LATICRETE 254 tile adhesive or other suitable LATICRETE latex thin-set adhesive.
5. In all wet area work as referenced in the NCC and AS3740-2021 - the installation shall have a 12mm fillet of LATICRETE HYDRO BAN® Fillet & Sealant (see DS-1196) or LATICRETE HYDRO TAPE (see DS-1292) installed to all wall/floor junctions, hob/wall junctions and movement joints where the membrane is bonded to the substrate as per clause 3.13.7 for a class 3 membranes. Use HYDRO BAN Fillet and Sealant for the installation of a 12mm fillet. See Detail 1A, 1B, 2A & 2B.
6. Many cement backer boards incorporate moisture blocking technology that require the use of a liberal application of LATAPOXY Moisture Shield (see DS-1176) prior to the application of HYDRO BARRIER™ Membrane.
7. Use HYDRO BAN Slurry (see DS - 1259) for areas requiring negative hydrostatic pressure resistance up to 2.5 bars prior to the application of HYDRO BARRIER Membrane.

TOOLS REQUIRED

Tape measure, mixing sticks, broom, slow speed mixer, extra buckets, paint roller with heavy napped roller cover, roller tray, paint brush, box cutter, caulk gun, clean up rags, spatula, small vinyl roller, pail of water and sponge.

APPLICATION: HYDRO BARRIER (see illustrations 1 -14)

Pre-Treat Cracks, Cold Joints, Control Joints and Seams:

Fill all substrate cracks (see limitations), cold joints, and control joints to a smooth finish using a LATICRETE latex fortified thin-set adhesive or HYDRO BAN® Fillet and Sealant.

Priming

All surfaces other than those covered with LATAPOXY Moisture Shield, must be primed. Apply a single coat of diluted PRIMER/water mix (see DS-1236) or PRIMER RTU (see DS-1293) to the point of refusal with a broom, roller, mop or sprayer so that the substrate is completely covered and small puddles form in low spots. While primer is still wet work primer well into the substrate so that puddles are spread evenly over the surface, absorbed and a uniform film has been applied. For porous substrates wait 20 minutes and reapply.

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

For "Wet Area Work" as referenced in the NCC and AS3740-2021, prepare and fill all substrate sheet joints, coves, corners, wall/floor junctions and hob/wall junctions to a smooth finish using a LATICRETE latex fortified thin-set. Alternatively or as required by substrate manufacturers, detail any joint void and profile with compressible foam or polystyrene void fillers to provide suitable backing for fillets. Use either HYDRO TAPE (see DS-1292) or a 12mm fillet of HYDRO BAN Fillet & Sealant (see DS-1196) to all wall/floor, wall/wall and hob/wall junctions prior to the application of HYDRO BARRIER Waterproofing Membrane. Immediately after HYDRO TAPE has been applied or when the HYDRO BAN Fillet & Sealant has skinned/dried^, apply a liberal coat^^ of HYDRO BARRIER Membrane at all treated wall/floor, wall/wall and hob/wall junctions approximately 200mm wide making sure that the coat^^ is of even thickness and is applied 100mm up the walls and 100mm across the floor with a paint brush or paint roller (heavy napped roller). When the first coat has completely dried^ to the dark green colour, apply a second liberal coat^^ of HYDRO BARRIER liquid and allow to dry^ for 24 hours. See fillet in Details 1A, 1B, 2A & 2B.

Pre-Treat Drains:

Membrane to drainage connections may be made over securely fixed, recessed puddle flanges or embedded/cast in outlets. Use a leak control flange where stack work is cut off flush with concrete substrate level. Flush and fill gaps around flanges and outlets with HYDRO BAN Fillet & Sealant prior to membrane application. Prepare the approved plastic or metal surfaces as previously stated prior to the application of HYDRO BARRIER Membrane. Ensure a minimum lap of 50mm to the plastic or metal surface with the HYDRO BARRIER Membrane. When the first coat has completely dried^ to the dark green colour, apply a second liberal coat^^ of HYDRO BARRIER Membrane and allow to dry^. Where a leak control flange is installed the membrane shall be applied over the top of the integrally fixed flange and be turned down and finished a minimum of 50mm into the flange body. See Detail 3.

Pre-Treat Penetrations:

Fill and dress any gaps around pipes, lights or other penetrations with HYDRO BAN Fillet and Sealant as required. When the sealant has cured, apply a liberal coat^^ of HYDRO BARRIER Membrane onto and around penetration. When the first coat has completely dried^ to the dark green colour, cover with a second liberal coat^^ of liquid and allow to dry^. This surface can then be further covered with the HYDRO BARRIER Waterproof membrane to the correct coverage and thickness. See Detail 4.

Main Application – HYDRO BARRIER™

Allow any pre-treated areas to dry^. Apply a liberal coat^^ of HYDRO BARRIER Membrane 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 completely dry^ to the dark green colour, approximately 3 – 5 hours at 21°C and 50% RH. Apply another liberal coat^^ of HYDRO BARRIER Membrane over entire surface to seal the first coat. Allow top coat to dry^ approximately 24 hours at 21°C and 50% RH. When last coat has dried^, inspect final surface for pinholes, voids, thin spots or other defects. Use additional HYDRO BARRIER Membrane to seal defects if required and allow installation to completely cure. Coves, corners, seams and board joints must be pre-treated as described above.

^Nominally 3 to 5 hours at 21°C

^^Wet film Thickness is an average thickness of 0.7mm.

Protection

Provide protection for work during installation from extremes in temperature, rain, humidity and wind till cured at 21°C and 50% RH. Protection time should be increased at temperatures between 10 – 21°C and 50% RH. Provide protection for newly installed dried membrane when covered with a thin bed ceramic tile, stone or brick installation, against exposure to 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

Where required, allow membrane to cure fully before flood testing. Typically 5 days with ambient/surface temperatures above 21°C with 50% R/H. Cold and/or wet conditions will require a longer curing time. For surface/ambient temperatures between 10 - 21°C allow a longer time to cure. Allow 1 day after cure prior to flood testing.

Installing Finishes

Once membrane has dried^ for 24 hours at 21°C and 50% RH, ceramic tile, stone or brick may be installed with a LATICRETE latex thin-set adhesive. Do not use solvent-based adhesives directly on membrane.

Drains and Penetrations:

Allow for a minimum 6 mm space between drains, pipes, lights or other penetrations and surrounding ceramic tile, stone or brick. Use LATASIL™ Silicone Sealant and LATASIL 9118 Primer where required. Use polyethylene backing rods and bond breaker tapes as appropriate for the joint - do not use grout, rigid joint fillers or thin-set adhesives in these joints.

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 half the 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 movement joints at coves, corners, abutments, and other changes in substrate plane and over any movement joints in the substrate. Movement 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. Use an appropriate foam backer rod and waterproof sealant

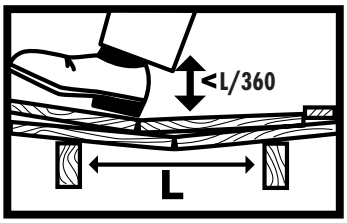
LIMITATIONS

1. Do not bond to OSB, particle board, Luan, Masonite® or hardwood surfaces.
2. Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for a waterproof membrane. When a waterproof membrane is required, use HYDRO BARRIER™ or HYDRO BAN®.
3. Must be covered with ceramic tile, stone, brick, dry pack thick bed mortar beds, terrazzo or other traffic bearing finish. Use protection board for temporary cover.
4. Not for use beneath cement or other plaster finishes. Consult with plaster manufacturer for their recommendations when a waterproofing membrane is required under plaster finishes.
5. Not for use under self-leveling underlayments or decorative wear surfaces.
6. Do not use over dynamic expansion joints, structural cracks or cracks with vertical differential movement
7. Do not use over cracks >1 mm in width.
8. Do not use as a vapour barrier (especially in steam rooms).
9. For external and immersed installations use LATICRETE HYDRO BAN Waterproofing Membrane.
10. Do not expose to negative hydrostatic pressure or excessive Moisture Vapour Emission Rates (MVER).
11. The position and type of vapour barriers, waterproof membranes, separation sheets and other moisture barriers in any tile installation shall be determined by the project designer to manage and mitigate the risk of condensation.

Visit www.laticrete.com.au for more information.

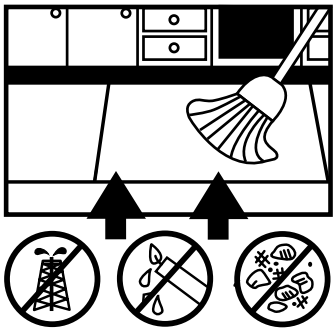
Illustrations 1-14

1

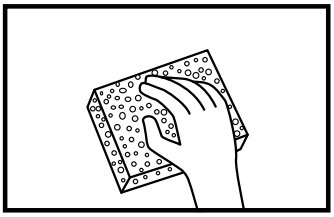


Ensure deflection meets installation requirements.

2

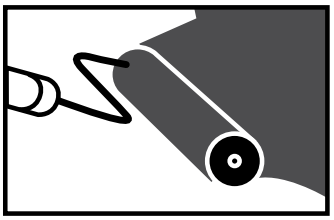


3



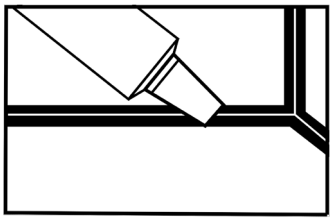
Clean & Hydrate the surface.

4



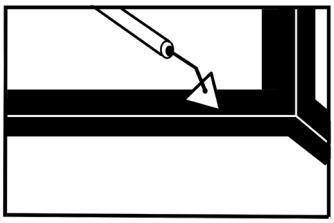
Prime

5A or 5B



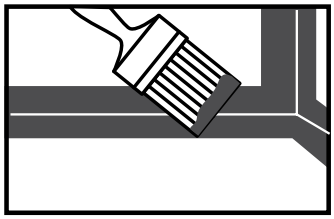
A: Install fillets to junctions as required.

or



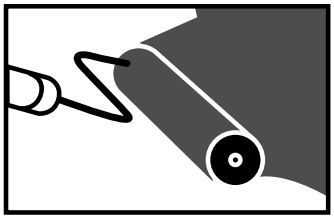
B: Install Tape to junctions as required.

6



Treat joints for first coat.

7



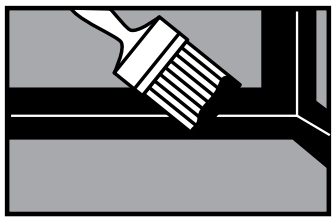
First coat.

8



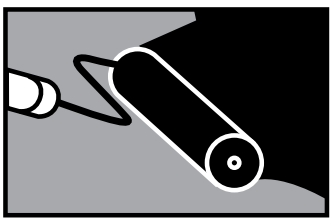
3 to 5 Hours at 21°C

9



Treat joints for second coat.

10



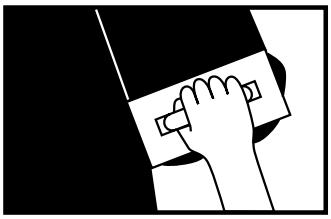
Second coat.

11

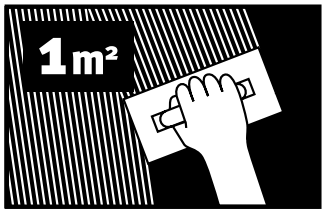


24 Hours at 21°C

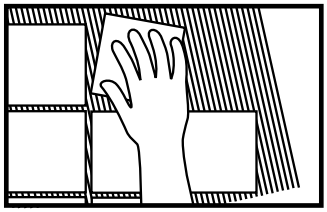
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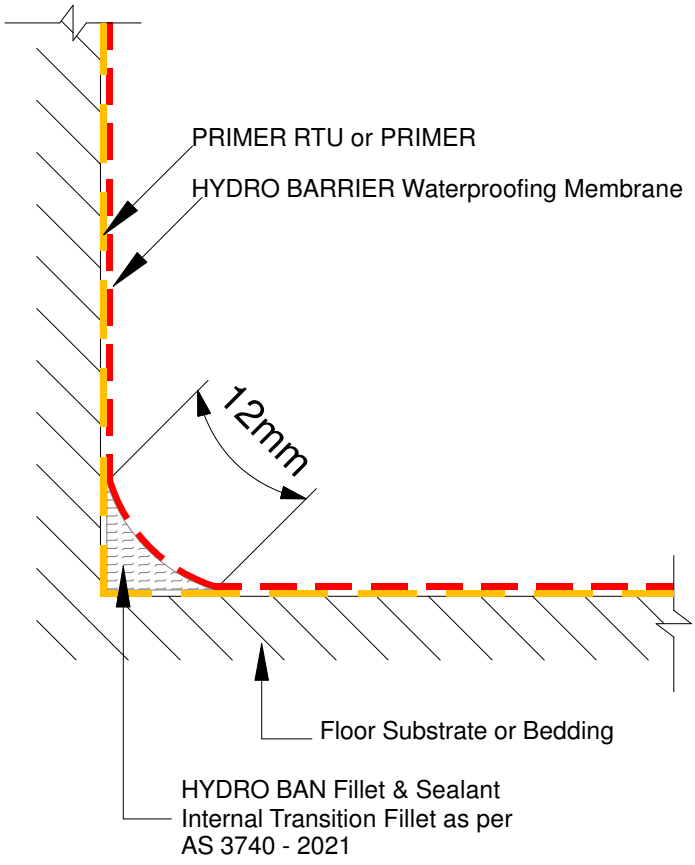
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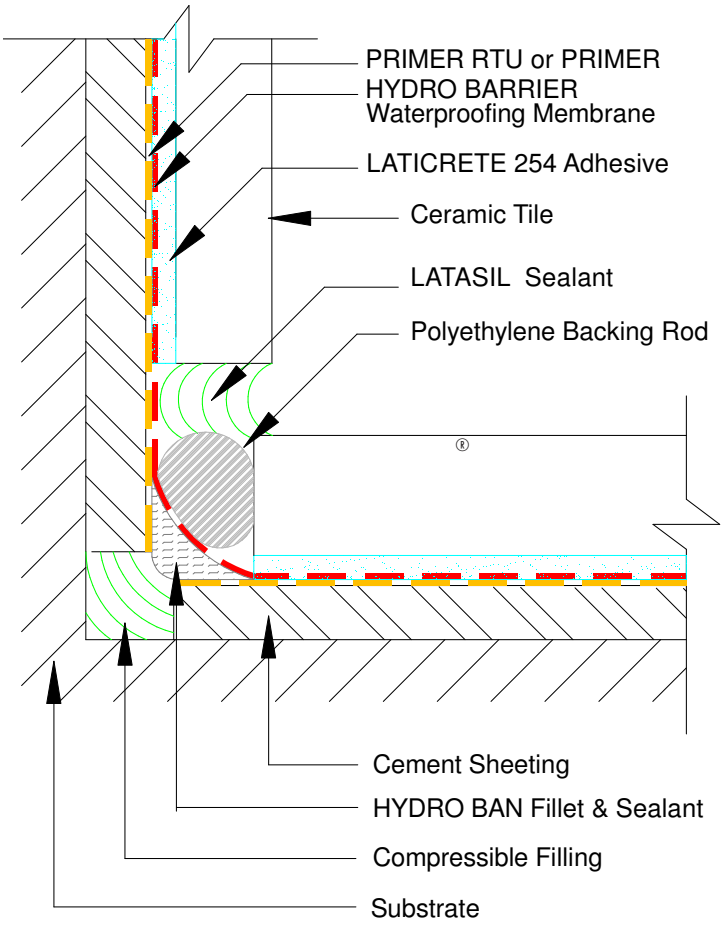
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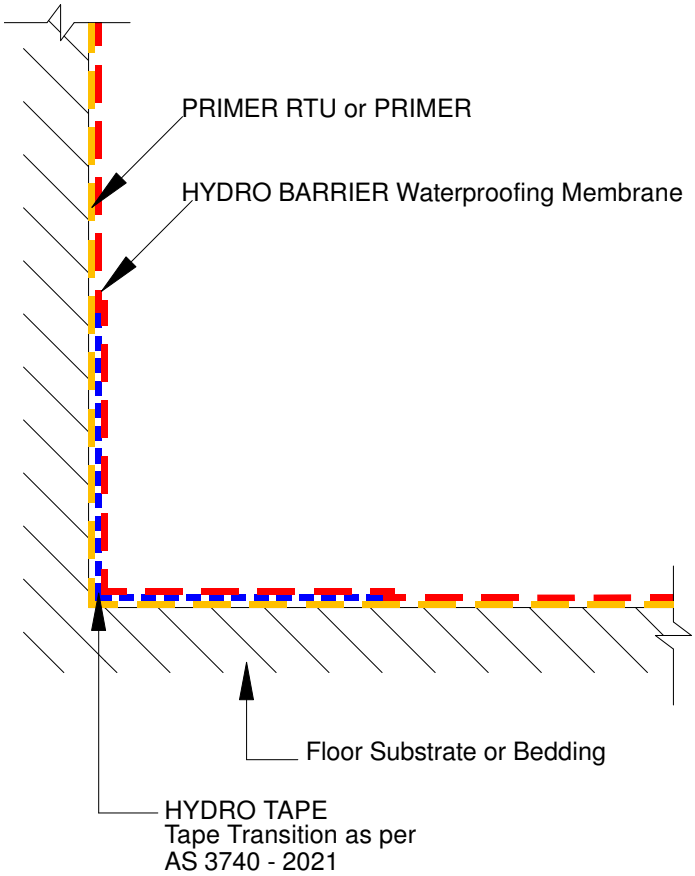
Details 1 – 4



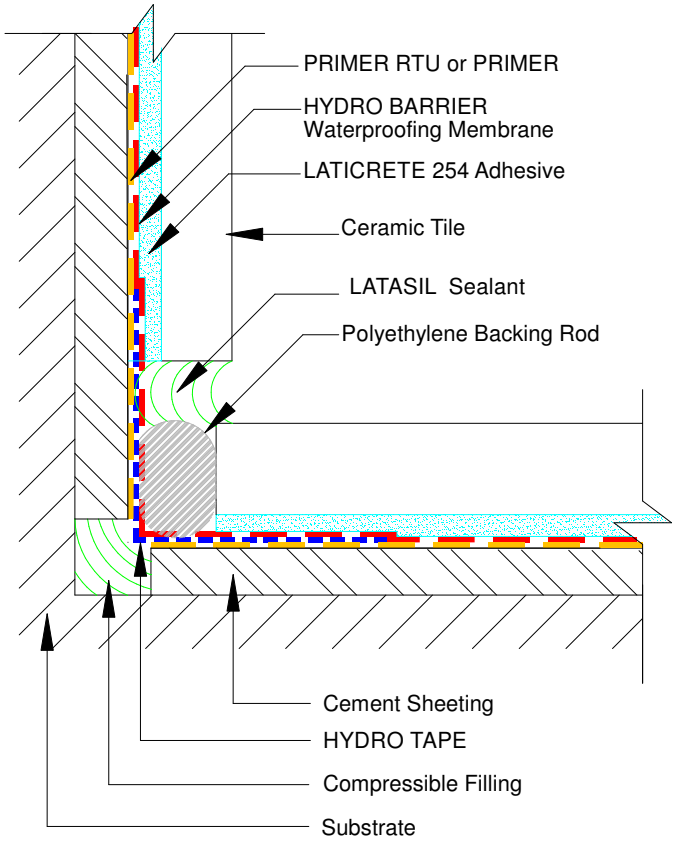
Detail 1A - Bond Relief Fillet



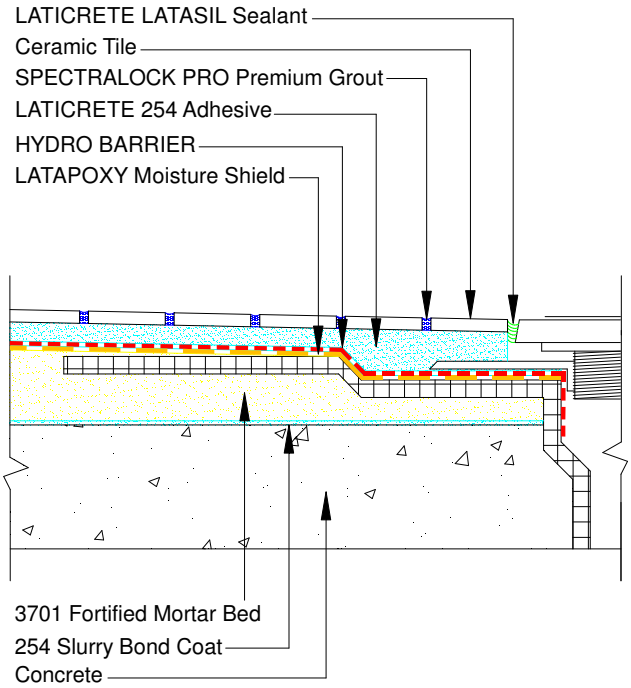
Detail 1B - Typical Fillet Thin Bed Installation



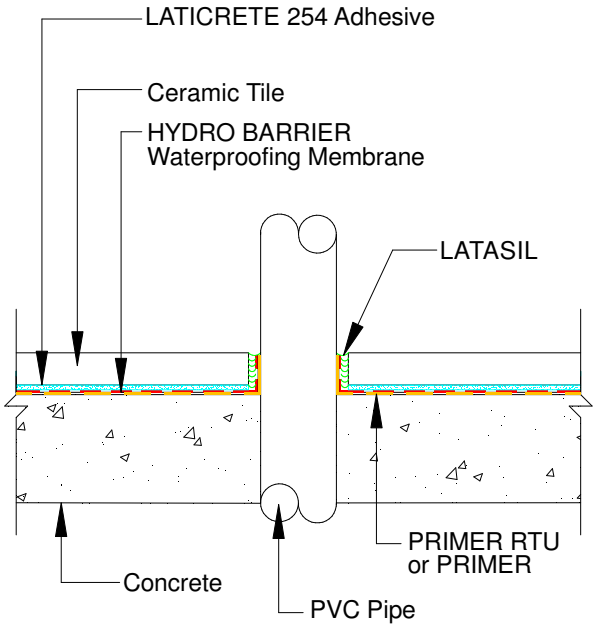
Detail 2A - Bond Relief Tape Transition



Detail 2B - Typical Tape Transition Thin Bed Installation



Detail 3 - Leak Control Flange



Detail 4 - Pipe Penetration

LATICRETE Australia Pty Ltd • 29 Telford Street, Virginia, QLD 4014 Australia
1800 331 012 | technicalsupport@laticrete.com.au | www.laticrete.com.au

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