

Technical Data Sheet

ActiTex



DESCRIPTION

ActiTex is an active waterproofing membrane of high strength geotextiles encapsulating a sodium bentonite layer (@4.88kg/m²).

Using a non-woven & woven geotextile which are needle punched together, to provide a robust and flexible delivery system, the layer of sodium bentonite is uniquely pre-confined within a strong, yet pliable membrane. ActiTex works by forming a low permeability membrane when in contact with water. Once wetted unconfined sodium bentonite can swell up to 15 times its dry volume. ActiTex is designed to allow small worms of sodium bentonite to pass through into the concrete sealing any small cracks caused by ground settlement, concrete shrinkage. The geotextile fibres are encapsulated into the surface of newly poured concrete forming a tenacious mechanical bond, eliminating the risk of water tracking. The swelling abilities allow ActiTex to self heal small tears or penetrations. The product is very robust, flexible, and can be installed in all weather conditions. Application is under slab, around foundations, on the back of retaining walls, and it can be applied to property-line construction, where temporary works are used to form the basement excavation (secant piling, contiguous piling, steel sheet piling, diaphragm walling, etc.). Laps are typically 100mm and are self-sealing. There are no requirements for additional products in the laps, which are automatically sealed thanks to bentonite extrusion from the woven surface and cut ends of the membrane. Whilst free-swell of the membrane is restricted due to the needle-punching, in a confined state (including fully peel-adhered ActiTex to concrete), swelling bentonite is forced through the weave and cut ends to provide waterproofing continuity at the concrete interface

PACKAGING & SYSTEM ANCILLARIES

ActiTex - 1.15m x 5.0m rolls, (@ 33kg per roll).
35 rolls per pallet (201.25m² @ 1,155kg)

For alternate sizes please refer to GDA-UK.

Ancillaries - ActiStop, ActiSeal, ActiFill,
ActiMesh, Acti100, Acti200, Acti300, ActiDrain

STORAGE

All products should be stored away from direct heat in dry conditions, under cover and away from the possibility of damage or premature contact with water.

HEALTH & SAFETY

Always refer to Materials Safety Data Sheets before use or consult with manufacturer.

TYPICAL USES

- Below ground structures – under slabs, foundations, pits, and behind retaining walls
- Property line construction - secant, contiguous piles, steel sheet piling, permanent shuttering, stabilised earth retention walls, king post walls.
- Void formers, compacted ground, insulation, clay heave board, etc.
- Tunnels, earth covered roofs
- Structures under continuous or intermittent hydrostatic pressure.

ADVANTAGES

- Active self healing properties.
- Mechanical bond, eliminating water tracking.
- Conformable, pliable – can be applied to varied contours & substrates.
- Robust membrane
- Ease of repair.
- All weather application, mechanical fix
- VOC free
- Proven world-wide application.
- Reproducible swell after wet-dry cycle.
- Unaffected by freeze/thaw cycling.

LIMITATIONS

- ActiTex is designed to be used in confinement below ground and must not be permanently exposed.
- ActiTex is designed for use under a minimum 150mm reinforced concrete.
- No running water - proper water management should be adopted before application of ActiTex.
- In conditions where salt-water or severe ground water chemical contamination exists or is expected, consult manufacturer.

TECHNICAL NOTE

This data sheet is for general guidance purposes only and may not be appropriate for certain conditions.

Conditions of use are beyond our control therefore we cannot warrant the results to be obtained.

The information given was correct at the time of issue. However, we are committed to continually improving products and reserve the right to change product specification.

For latest information contact GDA-UK.

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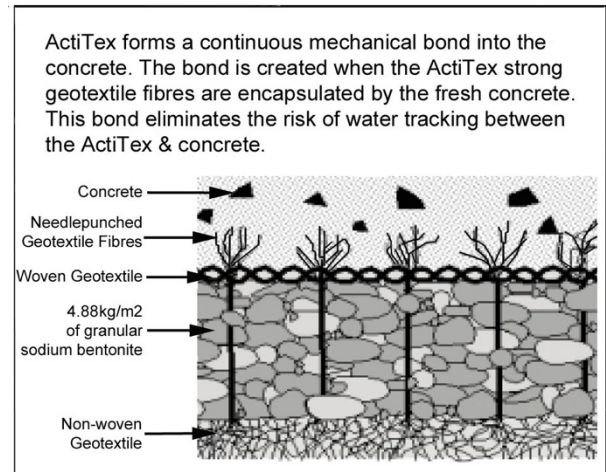


APPLICATION

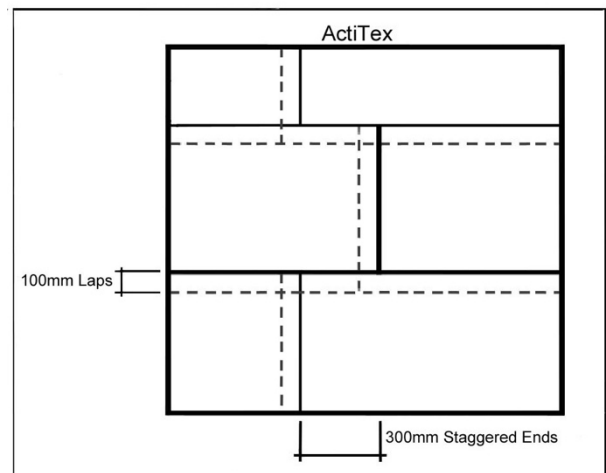
Installation should be carried out in accordance with manufacture installation guidelines. Use ancillary products as advised to form waterproofing system. Installing ActiStop in all applicable construction joints & penetrations. Schedule waterproofing application to allow prompt concrete placement or backfill to ensure waterproofing is exposed for only limited periods. For applications or details refer to GDA-UK for project specific details & guidance available upon request. For flowing or standing water site should adopt a method of dewatering & consult GDA-UK.

Under concrete slabs

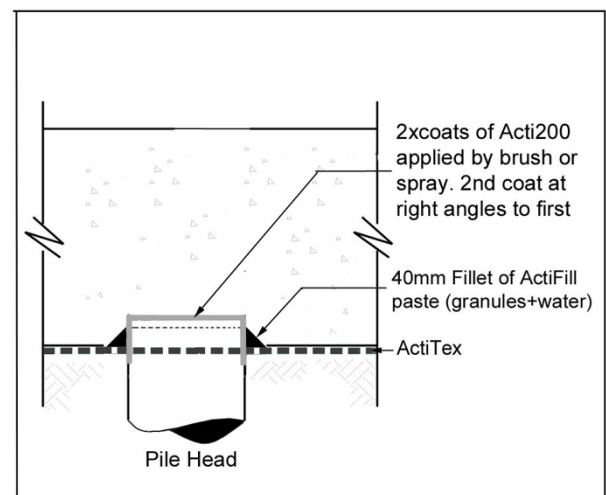
ActiTex is recommended for use under structural reinforced concrete slabs 150mm thick or greater. On compacted earth, substrate, concrete blinding, insulation or clay heave boards. Substrate surfaces should be free of voids or sharp protrusions. Voids can be filled with ActiSeal or with ActiFill. Install ActiTex around all foundations (ground beams, pile caps, pile heads, pads, etc.). Place ActiTex with the dark grey woven geotextile facing the concrete to be placed/waterproofed. Overlap all adjoining edges a minimum of 100mm and stagger roll ends to a minimum 300mm. Staple or nail edges together at 300mm centres to prevent any displacement before and during concrete placement. The ActiTex membrane should not extend into foundation bearing planes e.g. (pile caps, ground beams, pads, etc.), but should completely envelop them. To maintain waterproofing continuity in line with BS8102:2009 the bearing plane locations can receive application of Acti200 (cementitious waterproofing by crystallisation), to which ActiTex can be sealed to the bearing plane using a 40mm fillet of ActiFill paste. ActiTex should be cut snug to all applicable penetrations. Penetrations should be detailed with a 40mm fillet of ActiFill paste (horizontal surfaces) or ActiSeal (vertical surfaces) Where concrete blinding is not used detail an additional 50mm chase filled with ActiFill around the penetration under the ActiTex.



Cross Section of ActiTex



ActiTex - Laps & Staggered Ends



Pile Head with Acti200

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Pre-Applied

Apply ActiTex to formwork, either horizontally or vertically, by nailing or stapling, following general application guidelines for lapping all adjacent edges 100mm and staggering adjacent roll ends no less than 300mm (avoiding any four-way lap) and additionally ensuring that laps face downwards, as applicable. The white (spun) side should be against the formwork and the grey (woven) side should face the concrete being placed/waterproofed.

Extend the ActiTex the full depth of the formwork so that the ActiTex laps minimum 100mm over the ActiTex already cast into the slab edge & kicker wall and allow no less than 150mm at the top of the formwork (properly protected from damage), to provide a ground slab continuity later, if required.

Position formwork as required, and tie/space forms, penetrating ActiTex as necessary.

Normal concrete practise is sufficient in terms of striking times for formwork, but due care should be taken to ensure ActiTex remains bonded to the green concrete.

Where a slab 'toe' exists, and under-slab ActiTex has terminated at the top edge of slab, additional ActiTex will be required to link under-slab/edge of slab ActiTex with wall ActiTex. Apply 40mm fillet of ActiFill paste at the internal wall/slab corner and place additional ActiTex over slab 'toe' lapping minimum 100mm over the edge of the slab ActiTex and fixing minimum 300mm c/c and continue over the 'toe' terminating under the unbonded wall ActiTex flap at the back of the kicker.

Post-Applied

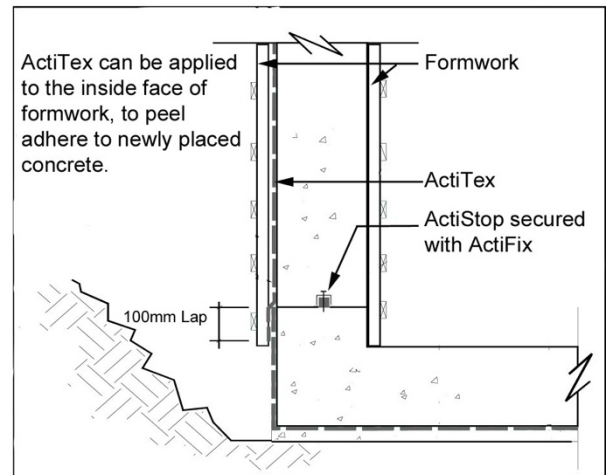
Apply ActiTex vertically or horizontally against concrete, starting with a minimum 100mm lap with the under-slab/edge of slab ActiTex (peel adhered to concrete) and fixing minimum 300mm c/c.

Following general application guidelines for lapping all adjacent laps 100mm minimum and staggering roll ends no less than 300mm (avoiding four-way laps), and additionally ensuring that laps face downwards, as applicable.

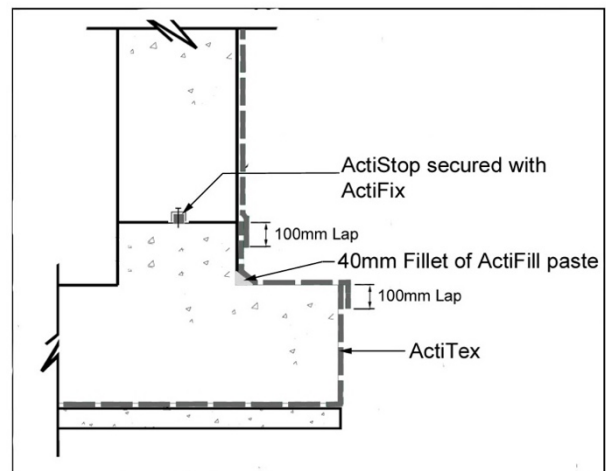
The grey side should be against the concrete, and the white (spun) side facing the installer.

Detail all horizontal and vertical internal corners with 40mm fillet of ActiFill or ActiSeal prior to application.

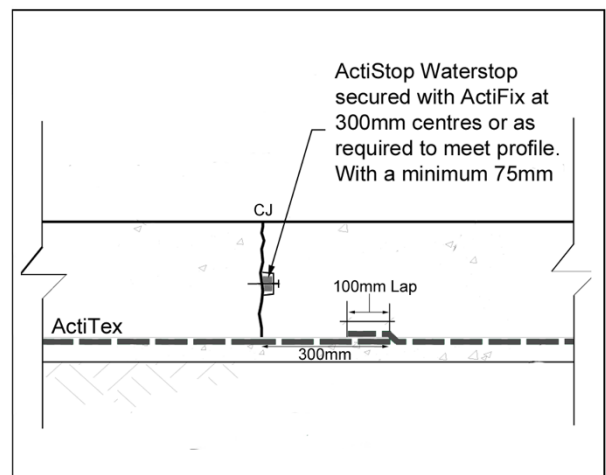
Note: ActiTex is not recommended for masonry walls.



Typical Pre-Applied Line Wall/Slab Junction



Wall/Slab Toe Detail



Typical Construction Joint

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Property Line Construction

ActiTex can be used to waterproof a range of property line construction, including metal sheet piling, secant and contiguous piling, king post, shotcrete, stabilized-earth retention walls & permanent shuttering, etc.

Surfaces should be free of large voids or projections. Voids, pits & cracks in excess of 20mm, shall be parged to flush condition using cement grout, ActiSeal or ActiFill paste. Protrusions greater than 20mm shall be removed or smoothed flush (note particular attention if protrusion falls behind a lap). Generally gradual undulating surfaces are acceptable, sudden changes in level, i.e. ridges and hollows are not. When working against property line, always start with the vertical application prior to installing ActiTex under slab. Apply the bottom run of ActiTex length ways/horizontally against the property line, approximately 900mm from the substrate/blinding level allowing 150mm of ActiTex to extend under slab.

Using large washer fixings suitable for shot-firing or by hand and following general application guidelines for lapping all adjacent edges 100mm and staggering adjacent roll ends no less than 300mm (avoiding four-way laps) and additionally ensuring that laps face downward, as applicable, ensure that ActiTex closely contours the substrate surface. For secant piling, locate fixings close to cleavages. On contiguous piling, ensure soil columns between piles are cut back to no less than one third the pile diameter, to create a fixing cleavage, and reduce the likelihood of soil dislodging behind the membrane. Consult GDA-UK if soil dislodged before application.

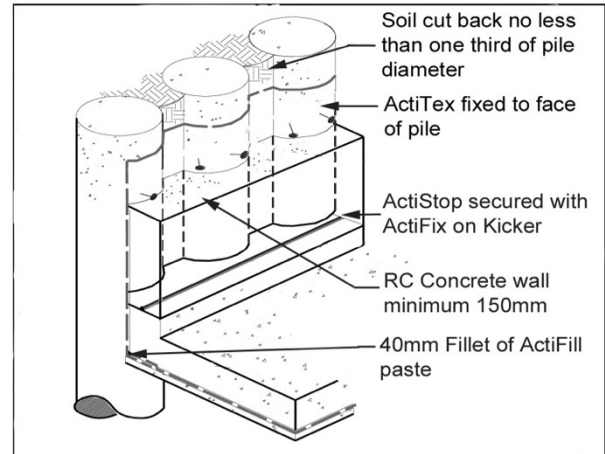
If running water evident between piles this will require managing before application of ActiTex – consult GDA-UK.

Detail all through wall pipe/sleeve penetrations with ActiStop as a puddle flange within the concrete ensuring minimum 75mm concrete cover.

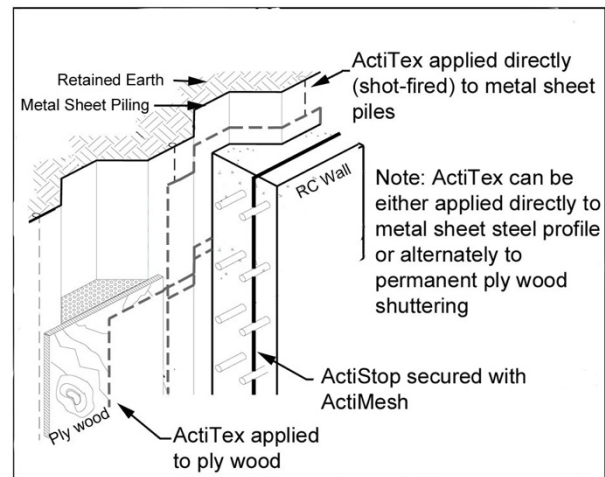
Where pipe, tie-back, etc., penetrations pass through ActiTex, ensure that ActiTex is cut to provide a snug fit and detail with 40mm fillet of ActiSeal. Where through wall removable ties are used, as opposed to 'lost' ties please consult GDA-UK.

Due considerations should be given to termination levels & details, with reference to the height of the property line construction, since cutting down the property line after ActiTex installation/concrete placement, will inevitably damage the waterproofing.

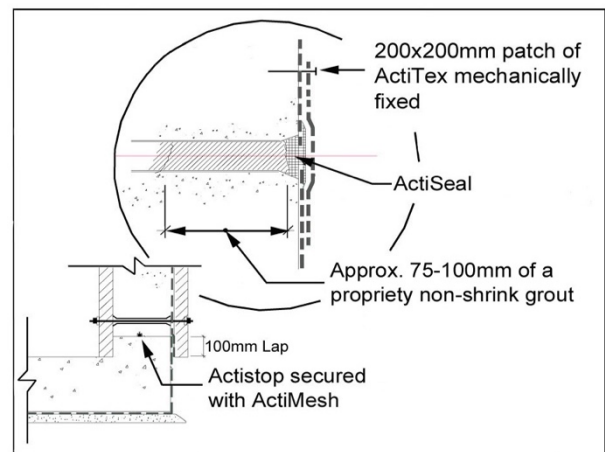
IMPORTANT NOTE: GDA-UK would always advise to contact us for guidance on project specific details, specification & installation.



Contiguous Piled Wall



Metal Steel Sheet Piling



Tie- Bolt Hole Detail