

PV™ 100

A unique multi-layer composite pre-applied waterproofing membrane that bonds integrally to poured concrete

Product Description

PV™ 100 pre-applied waterproofing membrane is a multi-layer composite waterproofing material with superior performance, including a layer of high-performance PE film, self-adhesive polymer layer and a unique particulate layer.

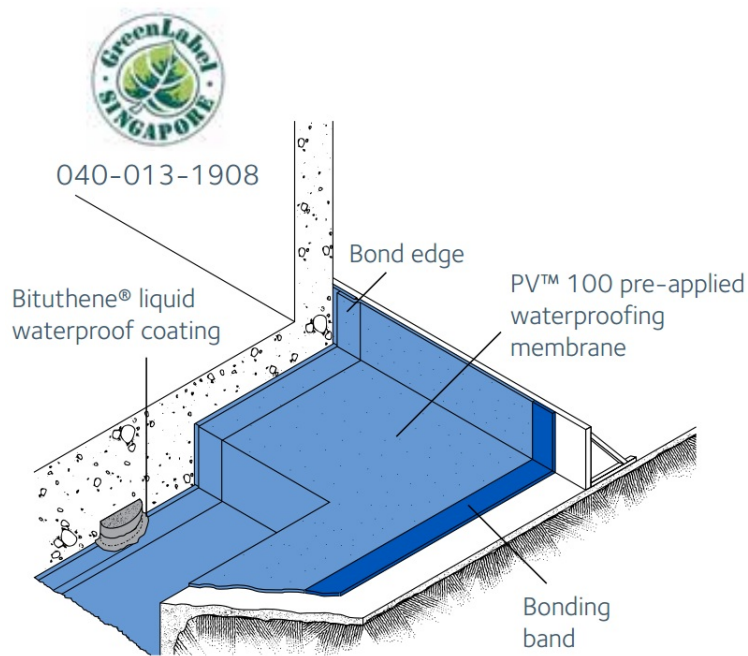
PV 100 pre-applied waterproofing membrane can be applied on a smooth level concrete surface, qualified compacted sand-stone cushion, or used as the waterproof layer of vertical surfaces of temporary and adjacent structures. After pouring concrete directly on to the paved PV 100 preapplied waterproofing membrane, the poured concrete will bond fully and permanently with PV 100 pre-applied waterproofing membrane.

PV 100 pre-applied waterproofing membrane protects concrete foundation against aggressive ground contaminants and is suitable for water and vapour-proofing for all basement grades.

PV 100 pre-applied waterproofing membrane is supplied at a width of 1.0m. Pour concrete after the steel bars are tied up. Please contact your local GCP representative for application details.

Product Advantages

- Forms permanent bond to concrete poured against it.
- Not affected by the displacement of the basal layer/ ground settlement beneath slabs
- Membrane is self-protecting. It can be trafficked immediately after application and does not require the use of protective layer
- Simple and quick to install, requiring no priming or fillets
- Unaffected by wet conditions
- Fully-adhered watertight laps and detailing
- Excellent bonding even under long-term water immersion



Installation

Substrate Preparation

All Surfaces

It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 12mm.

HYDRODUCT® drainage composites can provide the membrane with a good surface and facilitate underground structural drainage.

Horizontal Blinding

The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. The surface does not need to be dry, but standing water must be removed.

Vertical Sheet Piling

Use concrete, or 19mm thick plywood, insulation or other approved facing to sheet piling to provide support for the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 12mm out of alignment.

Membrane Installation

When placing PV 100 pre-applied waterproofing membrane, overlap the bonding edge. Use a steel roller to press the bonding edge firmly to ensure complete bonding and to achieve continuity. PV 100 pre-applied waterproofing membrane can be applied at -4°C and above. When installing PV 100 waterproofing membrane in cold or marginal weather, the bonding edge may be heated appropriately with hot air gun or similar devices to remove moisture in order to enhance bonding.

PV 100 Waterproofing Membrane

Place the membrane PE film side to the substrate with particulate layer side up, facing the concrete pour. End laps should be staggered to avoid build up of layers. Accurately position succeeding sheets to overlap the previous sheet 75mm along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Any initial tack will quickly disappear.

Roll Ends and Cut Edges

Overlap all roll ends and cut edges by a minimum 75mm and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary.

Remove the particulates from the surface of overlap area by hot air blower and apply PV100 Tape by peeling off release paper between membrane to membrane. Roll firmly to ensure complete adhesion without creases or voids.

Application with BITUTHENE[®] Membrane and Joints

If PV 100 pre-applied waterproofing membrane is applied together with Bituthene membranes, or for areas such as construction joints, allow for another 300mm-wide overlap so as to protect PV 100 pre-applied waterproofing membrane from being contaminated. This 300mm-wide membrane can offer overlap with the follow-up waterproofing membrane that is installed.

Pouring of Concrete

The concrete must be poured within 21 days of application of the membrane. During pouring, take care when vibrating concrete to avoid damaging the waterproofing materials.

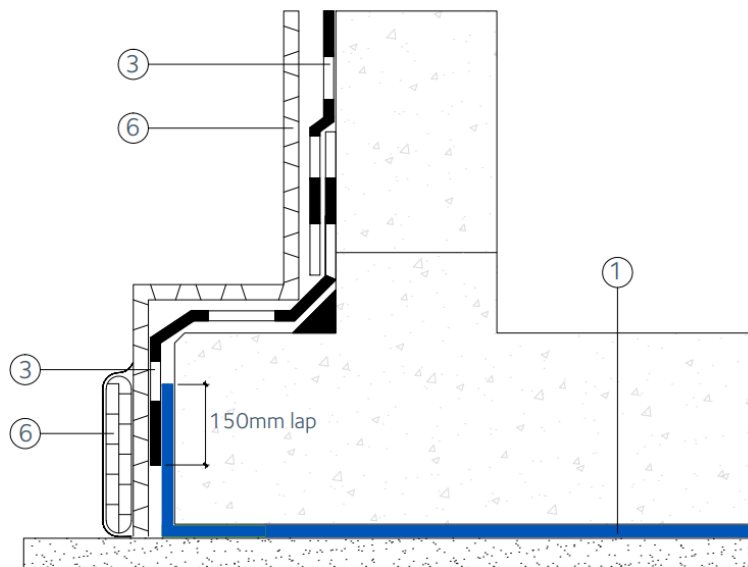
Formwork Removal

PV 100 pre-applied waterproofing membrane can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. PV 100 pre-applied waterproofing membrane is not recommended for conventional twin-sided wall forming systems.

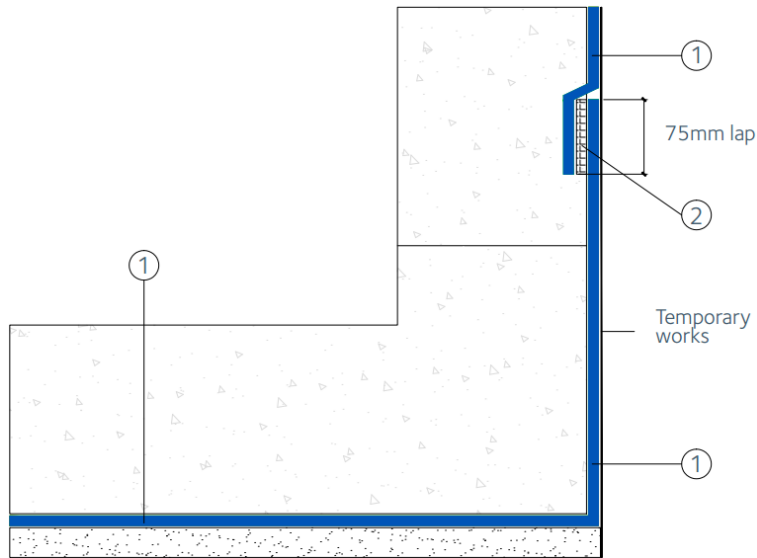
As a guide, to reach the minimum compressive strength stated above, a structural concrete mix with an ultimate strength of $40\text{N} / \text{mm}^2$ will typically require a cure time of approximately six days at an average ambient temperature of -4°C , or two days at 21°C . Please contact your local GCP representative for more details.

Physical Properties

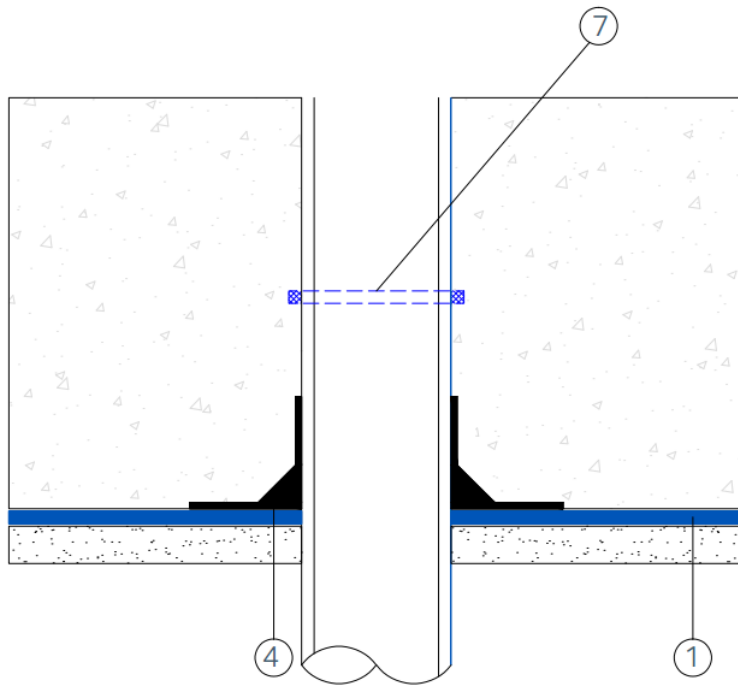
PROPERTY	TYPICAL VALUE	TEST METHOD
Colour	White	
Thickness	1.2 mm	ASTM D 3767
Tensile Strength, Film	27.6 Mpa	ASTM D 412 Modified
Elongation	400%	ASTM D 412 Modified
Low Temperature Flexibility	-25°C, Pass	ASTM D 1970
Water Migration/Resistance to Hydrostatic Head	>60M	ASTM D 5385 Modified
Crack Cycling	Pass	ASTM D 836 / ASTM C 1305 Modified
Peel Adhesion to Concrete, No Treatment	880 N/m	ASTM D 903 Modified
Dimension Stability	< 1%	ASTM D 1204
Puncture Resistance	800N	ASTM E 154



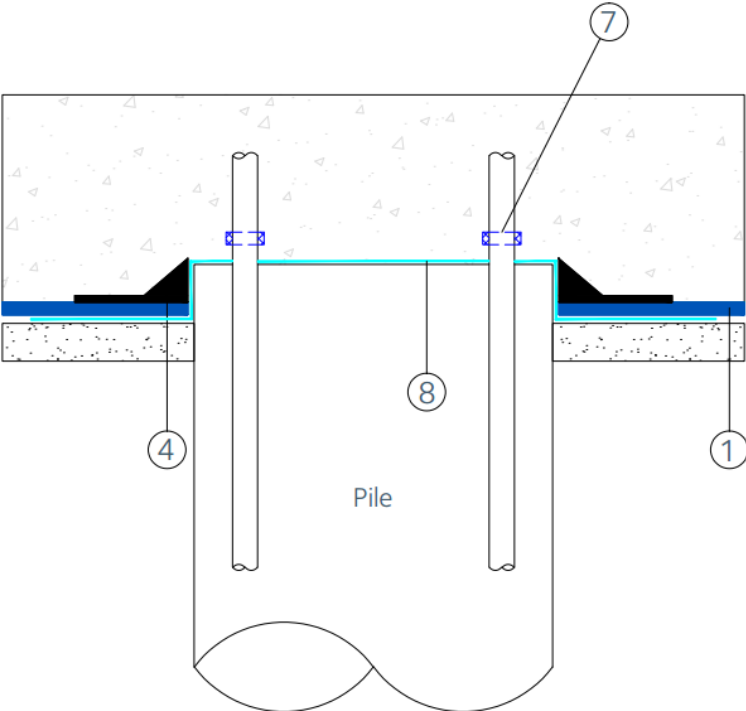
Details of foot of the wall foundation for drainage



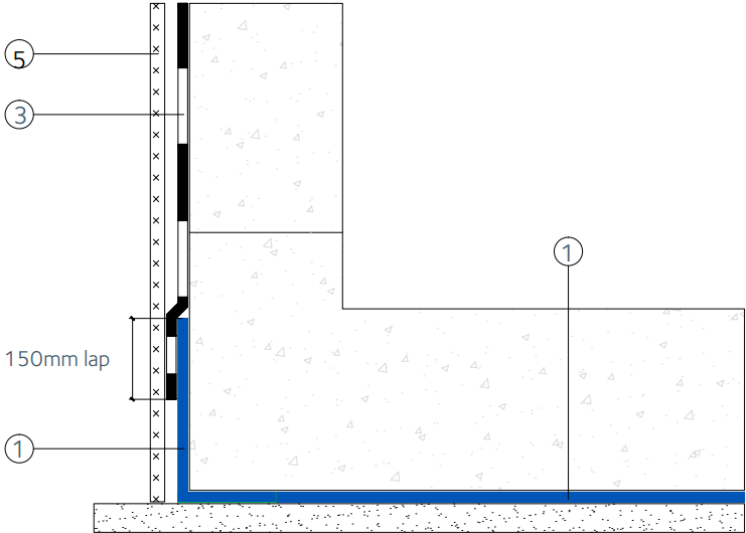
Details of wall foundation attached with temporary works



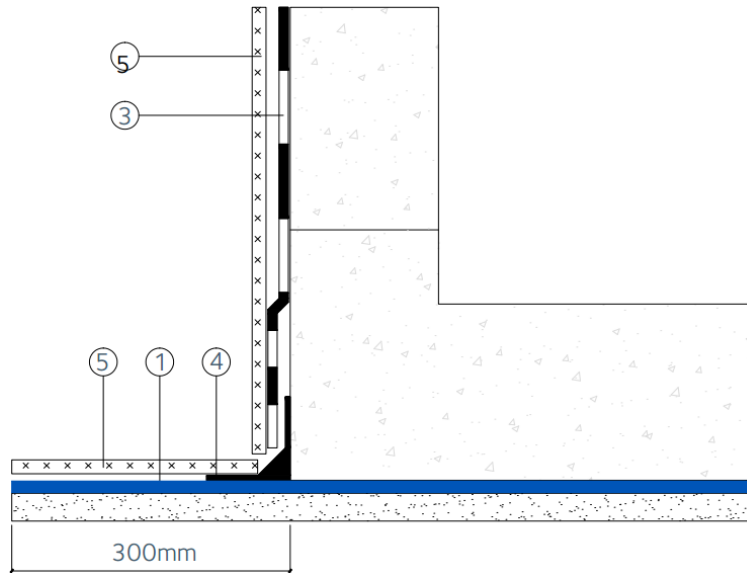
Pipe hole



Pile details



Details of wall base detail



Details of wall foundation for replacement of earlier formwork stripping

1	PV™ 100 Pre-Applied Waterproofing Membrane	5	Protection Board
2	PV™ 100 Tape	6	HYDRODUCT® Drainage Sheet
3	BITUTHENE® Membrane	7	DE NEEF® SWELLSEAL®
4	BITUTHENE® Liquid Membrane	8	BETEC® M-5 Crystallisation

The above drawings are typical examples and not details of the works. For details or assistance, please contact GCP Technical Services.

Supply

Thickness	1.2mm
Roll size	1.2m x 20m
Roll area	24m ²
Roll weight	39 - 41kg
Edge/end laps	75mm

Health and Safety

Refer to relevant Safety Data Sheet. Complete rolls should be handled by a minimum of two persons.

Storage

Dry conditions below 40°C. Store indoors or under cover on pallets. Do not double stack pallets.

Technical Services

For assistance with working drawings for projects and additional technical advice, please contact GCP Applied technologies.

gcpat.vn | For technical information: asia.enq@gcpat.com

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