



WPM 3100 BG

HDPE Membrane with PSA & Liner

DESCRIPTION

WPM 3100 BG is a unique composite sheet, comprising of a HDPE membrane, pressure sensitive adhesive and weather resistant plastic release layer. WPM 3100 BG is designed for adhesion with RCC and to receive heavy reinforcement without need for additional protection. As the mass of the structural concrete increases during the concrete pour, the pressure sensitive adhesive is 'activated' and forms a continuous bond with the poured concrete. This results in excellent adhesion through the development of substantial inter-molecular forces.

The membrane has excellent resistance to chemical acids, bases, alkalis, salts and other corrosive materials, while providing a barrier to water seepage from below ground. The sheet remains flexible over years, maintaining its integrity and continuing to provide protection. High mechanical properties of the membrane ensures superior puncture resistance, breaking & tearing strength, while enabling excellent heat weld fusion along the edges.

USES

- Basements: below raft, side walls
- RCC podiums
- Underground metro stations
- Tunnels, subways & underpass

FEATURES

- Supplied in pre-manufactured standard thickness. No need to worry about thickness variation at site, unlike liquid applied systems.
- Resistance to root penetration, suitable for green roofs.
- Superior barrier: acts as a barrier against aggressive ground salts, toxic contaminants and chemicals including methane gas, which may attempt to enter the structure through cracks in the concrete.
- Fully-adhering, watertight laps.
- Good crack protection: stress-absorbing and elongation properties to maintain a watertight seal to the structure if cracks develop in the base material or the slab.
- Flexible material that adapts to job site irregularities for ease of installation.

PHYSICAL PROPERTIES

Thickness ASTM D 751	1.2 mm \pm 10%
Breaking Strength ASTM D 412	250 Kgs/cm ²
Elongation at Break ASTM D412 Modified	500%
Tearing Strength ASTM D 412	130 kgs/cm
Puncture Resistance ASTME 154	1000 N

Peel Adhesion to concrete ASTM D 903	1500 N/m
Hydrostatic Head Resistance ASTM D 5385	71 m
Water Vapor Transmission Rate ASTM E 96	0.10 Perms
Brittleness Point ASTM D 2137	-30° C
Linear Dimensional change 6 hrs @ 70° C, ASTM D 1204	1% Max
Weather Resistance ASTM G 155	>21,600 KJ/(m ² .mm)

PACKING

Length	:	20 m
Width	:	1.2 m
Thickness	:	1.2 mm
Weight	:	28 kgs

Note: Other thickness and lengths can be customized based on project requirements

ACCESSORIES

WPM 3000 DSA - Double Sided Adhesive Tape - 80mm x 20m

APPLICATION INSTRUCTIONS

Surface Preparation

The substrate must be sound, free of loose aggregate and sharp protrusions. The surface does not need to be dry, but standing water must be removed to prevent contamination of overlaps.

Installation of membrane

Horizontal surfaces: Place the membrane with the HDPE film side to the substrate and the clear plastic release liner facing towards the concrete pour. Carefully align the membranes and roll it out ensuring a overlap with adjacent sheets along the adhesive selvedge. End laps should be staggered by a minimum of 500mm to avoid a build up of layers.

Leave plastic release liner in position until overlap procedure is completed. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller.

Vertical surfaces: Roll out the membrane with the plastic release liner facing towards the concrete pour. Mechanically fasten to the substrate using fixings (i.e. fasteners) appropriate to the substrate. Carefully align the membranes and roll it out ensuring a 80 mm overlap with adjacent sheets along the adhesive selvedge. Secure the top of the membrane using a

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batten or fixing 50mm below the top edge. Mechanically fasten to the substrate, typically at 600mm centres, using fixings (i.e. fasteners) appropriate to the substrate. Fixings can be made through the selvedge, this allows firmly rolled overlaps, which are covered by the subsequent strip of HDPE membrane. End laps should be staggered by a minimum of 500mm to avoid a build-up of layers. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly.

Short Edge Overlapping or Cut Edges

Overlap all roll ends and cut edges by a minimum 80 mm and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Peel one side of the WPM 3000 DSA and stick it onto the cleaned surface and press firmly using a roller. Position the upper lap of the membrane ensuring a full and aligned overlap. Once the lap is positioned correctly, slowly remove the release film, while firmly rolling the joined sheets together with the seam roller.

Membrane Repair

Check membrane after finishing bottom bar laying & rectify any damage & puncture. Ensure the area to be repaired is clean and free from contamination. Damaged areas to be repaired with patch of WPM 3100 BG fixed with WPM 3000 DSA.

Pouring of Concrete

It is recommended that concrete be poured within 56 days (42 days in hot climates) of installation of the membrane. Ensure that the plastic release liner is removed from all areas of the membrane. Concrete must be placed and compacted carefully to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

STORAGE

Store in dry ventilated condition, protect from direct sunshine, rain or other extreme environment and in their original, closed wrapping. Storage temperature must be less than 45°C. The max height of stack is 5 layers in the original unopened packing. Prevent squeezing between membranes during transit.

DISPOSAL

Disposal of empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE

Sold subject to the Company's conditions of sale which are available on request.

NOTE

The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products. However, as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.



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