

HDPE PRE APPLIED FULLY BONDED WATERPROOF MEMBRANE

Description

Dr. Fixit Prebond S membrane is a preformed and pre applied HDPE fully bonded membrane that bonds to the wet concrete cast on the membrane. After the membrane bonds with the concrete it forms an integral seal which prevents lateral water migration and makes it unaffected by any substrate settlement. Reinforcement can be directly laid on top of the membrane and it does not require screed protection.

Dr. Fixit Prebond S is a unique HDPE membrane comprising of a HDPE layer and a pressure sensitive adhesive layer which is covered by a weather proof protective sand particulate layer. The adhesive layer is activated when the concrete is poured /cast on the membrane and it enables the membrane to bond to the underside of the concrete which prevents the ingress of water into the structure as well as prevents tracking of water between the membrane and the structure thereby providing a positive side protection by virtue of an external tanking system against ingress of sub soil water. Dr. Fixit Prebond S can be used for horizontal as well as vertical blind side.

Standard compliance / Specification

Complies with IS 16471:2017 & BS 8102:2009 recommendations for providing Type A protection

Typical Application

- Basement Raft & confined retaining walls.
- Subway and UG metro projects.
- Excellent UV resistance for longer exposure up to 45 days.
- Cut and cover tunnels.
- Other underground civil structures.

Features

- Excellent bonding with concrete applied on membrane, to protect concrete effectively for the design life of the structure.
- Low flatness requirement to substrate; reliable overlapping; fast and easy application without requiring use of flame/ gas torch.
- Lesser joints due to larger roll widths
- Adaptable to varying surface profile.
- Resistant to high hydrostatic ground water-pressure.
- Resistant to aggressive ground water conditions.
- Eco-friendly material.

Method of Application

1 SURFACE PREPARATION

- Horizontal Blinding - Monolithic concrete blinding must be free of loose aggregate and sharp protrusions. The surface does not need to be dry. However, standing water must be removed.
- Vertical confined surface - Use concrete, sacrificial plywood, masonry with flush levelled joints or other approved facing to provide smooth, level and even support to the membrane.

2 MEMBRANE INSTALLATION

- Dr. Fixit Prebond S membranes can be applied ambient at temperatures of -4°C or above.

3 HORIZONTAL SUBSTRATES

- Place the membrane with adhesive side facing the concrete pour and HDPE film side facing the substrate.
- End laps should be staggered to avoid a buildup of layers. Accurately position succeeding sheets to overlap the previous sheet by 75 mm along the marked selvedge.



- 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.
- Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap.
- Leave plastic release liner in position until overlap procedure is completed.
- As an additional protection any portion which may be opened up shall be bonded together using a hot air blower/ using additional tapes.

4 VERTICAL SUBSTRATES (CONFINED RETAINING WALL AREAS)

- Membrane can be vertically installed using double sided adhesive tape or mechanically fasten the membrane vertically using low head fixings (i.e. fasteners or roundels) at selvedge portions only with the adhesive side facing towards the concrete pour.
- The membrane may be installed in any convenient length. Secure the top of the membrane using a batten such as a termination bar or fixing 50 mm below the top edge.
- Fixings can be made through the selvedge so that the membrane lays flat and allows firmly rolled overlaps.
- Any additional fixings must be covered with a patch of Prebond Tape.
- Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal.

ROLL ENDS AND CUT EDGES

- Overlap all roll ends and cut edges by a minimum of 100 mm and ensure the area is clean and free from contamination. Apply Dr. Fixit double sided Tape over the lap and roll firmly.

5 CORNERS

- Internal and external corners should be pre-formed as per manufacturer instruction, overlapping the membrane with a minimum of 100 mm selvedge and sealing with Dr. Fixit Pre-Bond Tape (both Double side & Single Side tapes). Ensure that the apex of the corner is covered and sealed with tape and roll firmly.

Technical Properties

PROPERTIES	TYPICAL VALUE (1.5 mm thk)	TYPICAL VALUE (1.8 mm thk)	TEST METHOD
Color	White/Off White	White/Off White	Visual
Thickness Composite	1.5 mm	1.8 mm	ASTM D 3767
Bare HDPE thk	0.9 mm	1.2 mm	ASTM D 3767
Tensile Strength(Bare HDPE film)	25 Mpa	28 Mpa	ASTM D412
Elongation (Bare HDPE film)	500%	500%	ASTM D412
Puncture Resistance	1000 N	1500 N	ASTM E154
Resistance to Hydrostatic head	70 Mtr	70 Mtr	ASTM D5385
Low temperature flexibility	(-)25°C Pass	(-)25°C Pass	ASTM D1970
Peel Adhesion to concrete	1500 N/m	1500 N/m	ASTM D903
UV Exposure	45 days Pass	45 days Pass	Internal test method
Crack Cycling	Pass	Pass	Pass (ASTM C 1305)
Dimension Stability	< 0.5 %	< 0.5 %	ASTM D1204
Lap Peel Adhesion	1.5 N/mm	1.5 N/mm	ASTM D1876

All test parameters are obtained under controlled Lab conditions.

Limitations

- 1 Product is approved for uses only those specifically detailed in this product data sheet. Contact Pidilite Technical Services where any other use is anticipated or intended.
- 2 Technical properties may vary by 5% due to practical challenges like variation in UTM machines, rate of loading, sample preparation, thickness measurement and other manual errors. Contact Pidilite Technical services in such situations.
3. During summer season the membrane adhesive may slightly stick to shoes while walking over it. Please note that this is due to the residual tackiness of the adhesive and it is a normal phenomenon, which will not affect performance of the membrane. Contact Pidilite Technical services in such situations.

Note: Tensile strength & elongation has been tested longitudinally. Results in transverse direction may vary.

Packaging

20 mtr x 2.4 mtr roll @ composite thickness of 1.5 mm & 1.8 mm

Shelf Life

The shelf life is typically 12 months if stored as per the recommendations in a covered and secured storage space.

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