

Dr. Fixit Prebond-W



PRE APPLIED FULLY BONDED HDPE WELDABLE MEMBRANE

Description

Dr. Fixit Prebond W membrane is a preformed pre-applied HDPE fully bonded weldable 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 below the slabs. Reinforcement can be directly laid on top of the membrane without screed protection.

Dr. Fixit Prebond W is a unique HDPE membrane comprising of a HDPE layer and a pressure sensitive adhesive layer which is covered by a weather proof protective layer. The adhesive layer is activated when the concrete is poured on the membrane and it enables the membrane bond to 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 and provide a positive side protection against ingress of sub soil water. Dr. Fixit Prebond W can be used for horizontal application.

Standard compliance / Specification

Complies with IS 16471:2017 & BS 8102:2022 recommendations for providing Type A protection

Typical Application

- Basements
- Subway and UG metro Stations
- Caverns
- Other underground civil structures.

Features

- Hot welded joints to ensure zero leakage.
- Excellent Adhesion with concrete.
- Fast and easy application.
- Lesser joints and overlaps, due to large roll widths.
- Excellent UV exposure up to 45 days
- Adaptable to varying surface profile of the substrate.
- Resistant to high hydrostatic ground water-pressure
- Resistant to acid, alkali, chlorides and sulphate attack
- Tested for 25 yrs of durability

Method of Application

1 SURFACE PREPARATION

- It is essential to prepare sound and levelled substrate with no gaps, cavities or projecting ribs..
- Horizontal Surface - 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 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 W membranes to be applied at ambient 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 100 mm along the marked selvedge.



- The HDPE membranes are welded together by hot wedge. End laps and side laps should be with the weld size of minimum 50 mm in case of single weld system. In case of a double weld system, comprising of two parallel welds of 15 mm wide each with a 20 mm air channel gap in between the two weld lines (weld size may little vary as per machine make & model).
- Leister Twinny or other suitable hot wedge equipment is recommended where welding temperature should be around 380°C to 400 °C. Speed of the machine can be adjusted between 3-4 rmt/min.
- After welding the overlap area should be covered with single sided hdpe tape.
- 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. Ensure to remove sand and adhesive from membrane before proceeding for welding at joints.
- Extend the membrane on sides of the raft maximum upto 200 mm from bottom of PCC.

4 VERTICAL SUBSTRATES

- Membrane to be hanged vertically by securing the top of the membrane using a batten like termination bar fixing 50 mm below the top edge.
- Vertical welding to be incorporated using potable double seam welding machine. Overlapping locations should be beyond reinforcement locations. Membrane vertical installation and welding should be completed before placing reinforcement.

5 CORNERS

- Internal and external corners should be pre-formed as per manufacturer instruction, overlapping the membrane with a minimum of 100mm selvedge by hot air / hot wedge welding. Ensure that the apex of the corner is covered and sealed with welding.

Technical Properties

PROPERTIES	TYPICAL VALUES- 1.5 MM THICK MEMBRANE	TYPICAL VALUES- 1.8 MM THICK MEMBRANE	TEST METHOD
Colour	White/ Off White	White/ Off White	Visual Observations
Thickness of Composite Membrane	1.5mm	1.8mm	ASTM D 3767
Thickness of Bare HDPE film	0.9 mm	1.2 mm	ASTM D3767
Tensile Strength (Bare HDPE Membrane)	25 N/mm ²	28 N/mm ²	ASTM D412
Elongation (Bare HDPE Membrane)	500%	500%	ASTM D412
Puncture Resistance	1000 N	1500 N	ASTM E154
Low Temperature Flexibility (-25°C)	Pass	Pass	ASTM D1970
Resistance to Hydrostatic Head	70 Mtr	70 Mtr	ASTM D5385
Peel Adhesion to Concrete	1500 N/m	1500 N/m	ASTM D903
Lap joint strength in shear	15000 N/mtr	15000 N/mtr	ASTM D6392
Water Vapour Transmission	0.05 gm/m ² /day 0.03 Perms	0.05 gm/m ² /day 0.03 Perms	ASTM E96
Water absorption	<0.5%	<0.5%	ASTM D570
UV Resistance	45 days pass	45 days pass	Internal Test Method
Dimension Stability	0.1 %	0.1 %	ASTM D1204

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, type 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 & 20 mtr x 2.0 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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