iStik 100 XPE

Cross-laminated, PE-backed, Bituminous, Self-adhesive Membrane

DESCRIPTION

iStik 100XPE is a blend of high-performance tropical grade SBS polymer, selected additives and bitumen which is coated on to a high strength, dimensionally stable, non-perforated cross laminated PE film to form a self-adhesive membrane. iStik 100XPE is used for the protection of below ground concrete structures against the ingress of water and moisture. iStik 100XPE conforms to BS 8102 standards.

RECOMMENDED APPLICATIONS

iStik 100XPE is best suited for protection of below grade concrete structures. The membrane is used for both damp proofing and waterproofing applications. Ideally suited for:

- Underpasses and tunnels.
- Retaining walls and foundations.
- Lift pits and manholes.
- Foundations of water retaining structures.
- As DPC layer under block work for mitigating rising dampness.

FEATURES & BENEFITS

- Cold-applied: Easy and fast application without torching increasing site safety.
- Cross lamination ensures high dimensional stability when exposed to high temperatures and load.
- Self-adhering: Easy peel and stick method without the need for complicated tools.
- Factory controlled thickness: Ensures equal cover on the whole surface regardless of points, protrusions and pits.

TECHNICAL PARAMETERS

Physical Properties	Test Method	Value
Thickness, [mm]	EN 1849-1	1.6 / 2.1
Top Surfacing Film, (mm)	-	0.1 Cross Laminated HDPE
Mass per unit area, (kg/m²)	EN 1849-1	1.6/2.1
Softening point, (°C)	ASTM D 36	>105
Low Temp Flexibility	BS EN 1109	Pass
Tensile strength (Membrane)(MD/CD) , (N/mm²)	ASTM D 638	4.5/4.8
Elongation of compound (MD/CD), (%)	ASTM D 412	>1250/1250
Tensile strength (Film) (MD/CD), (N/mm²)	ASTM D 882	45/48
Elongation (Film), (MD/CD), (%)	ASTM D 882	230/200
Tear Strength (Film) (MD/CD), (N/mm)	ASTM D 1004	340/310
Crack Bridging ability, (mm)	ASTM C 1305	3.0
Puncture resistance, (N)	ASTM E 154	225
Resistance to Hydrostatic Pressure @7Bar	BS EN 12390	Pass
Water absorption-24hrs, (%)	ASTM D 570	< 0.1
Water vapor transmission, (g/m²/24hrs)	ASTM E 96	<0.1
Adhesion to primed concrete, (N/mm)	ASTM D 1000	2.2
Adhesion to primed steel, (N/mm)	ASTM D 1000	2.0
Adhesion to self, (N/mm)	ASTM D 1000	2.4
Chemical resistance, (pH)	ASTM D 543	2.5 to 11.5
Application temperature (Ambient), (°C)	-	10 to 45
Service temperature (Surface), (°C)	-	-20 to 75

All values given are subject to 5 – 10% tolerance in accordance with the test standard

APPLICATION INSTRUCTION

The application temperature should be between 10°C to 45°C. Application procedures may vary slightly depending on site conditions. Recommended guidelines for the application of the coating system is as follows:

SUBSTRATE PREPARATION

The surface must be clean and structurally sound. Any loose particles on the surface should be removed. Use industrial grade detergent or degreasing compounds for removing oil, grease and wax contaminants. Cement laitance, mold, release agents, curing membranes and other contaminants must be removed from the surface by grinding or scarifying followed by vacuum cleaning.

PRIMING

All surfaces should be primed with iKote SB41. Application of the primer can be done with a brush or roller. Commence further activities only after the primed surface becomes touch-dry. If the primed area is left open for more than 48hours, repriming might be required depending on the dust accumulation on the surface.

PLACING

Membranes should always be placed from the lower points to the higher points. This is to ensure that the overlap edges are never against the flow or water. Internal corner joints should be prepared with sand cement mortar fillet or a preformed fillet. External joints shall be chamfered to remove the sharp pointed edges. A coat of liquid membrane is required to be applied on the corner joint if fillet cannot be placed. The corners joints should be treated with a 300mm reinforcement strip of iStik 100PR which is laid first. On circular areas, a square piece of iStik 100PR should be placed with the edges star cut to ensure full bonding.

Unroll the membrane and cut it to the right size as required for the substrate. Lay the membrane on the surface and ensure that the alignments are done correctly. Peel off the first 5 cm of the membrane and stick the top portion. Reroll the membrane on the core until the adhered area. Pull the release film off for a length of 20mm and press the membrane on to the surface. While pressing, care should be taken to press the center area and then push towards the sides. This method helps to avoid air entrapment and ensure better adhesion with the substrate. Adjacent rolls are laid with a side overlap of 50mm and end overlap of 100mm. The overlaps should be pressed firmly either with a roller or cloth press for proper sealing.

iStik 100PR should be protected from subsequent construction activities with iShield or a protection membrane from the iStik range immediately after the application of the membrane. The protection board can either be spot bonded with iBond N20 or with iStik TS. On horizontal surfaces the membrane may also be protected by a sand cement screed. All detailing works on expansion and construction joints, pipe penetrations, internal and external corners must be done as per the manufacturer's guidelines. Kindly consult INNOBIT's technical department for the relevant drawings.

IMPORTANT GUIDELINES

- Application of the protection course (Board/membrane/screed) is recommended to be done immediately of iStik 100PR membrane. In situations where the application gets delayed due to certain unavoidable site activities, it is recommended that the applied membrane temporarily protected by a 100gsm Geo-textile fleece or any other suitable means from UV and sunlight This will minimize the formation of bubbles caused by the release of water vapor from concrete during high temperatures
- The bitumen compound of the membrane tends to become soft and tacky at elevated temperatures, which makes the application exceedingly difficult. Membrane application in hot climatic regions during the summer months should be done during the early morning or late evening times.
- For application in submerged structures, contact INNOBIT's technical team prior to application.
- iStik 100PR is not designed to be used on top of slabs which will be subjected to vehicular traffic.
- Conditioning of both the membrane and the concrete surface would be required for application below 15°C

PACKAGING

iStik 100PR 1.5mm/1.6mm	1m x 10m x 1.5mm
iStik 100PR 1.5mm/1.6mm	1m x 20m x 1.5mm
iStik 100PR 2.0mm	1m x 10m x 2.0mm
iStik 100PR 1.0mm	1m x 15m x 2.0mm
iKote SB41	20lt. Pail & 200lt. Drum
iShield 3.0mm/3.5mm/4.0mm/6.0mm	1m x 2m

STORAGE

Store all materials in a covered, cool, and dry place. The storage temperatures should always be between 5°C and 50°C. Store on a raised platform. Do not store material over the palleted rolls.

HEALTH & SAFETY

Caution should be exercised while applying the product as it is with any other bitumen material. Impervious gloves and barrier cream should be used when handling these products. Bitumen stains on skin can be removed by a suitable solvent. Seek medical attention if situation becomes critical. For more details, refer to the product MSDS.

Innobit Industries LLC
Umm Al Thoub, New Industrial Area, Umm Al-Quwain, UAE
Tel: +971 6 706 9111 Email: info@innobit.me