TECHNICAL DATA SHEET
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INNOBIT

iStik 100XPE

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-ad hesive 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

TYPICAL 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 foundations, retaining walls, underpasses etc.

- 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 AND 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 - ensure equal cover on the whole surface regardless of points, protrusions and pits.

TECHNICAL PROPERTIES

Properties	Test Method	Value
Thickness, [mm]	EN 1849-1	1.5
Top Surfacing Film, (mm)	-	0.1 Cross Laminated HDPE
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	>1
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 INSTRUCTIONS

The application temperature should be between 10°C to 45°C. Application procedures may vary slightly depending upon 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 or 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.

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PRIMING

All surfaces should be primed with primer iKote SB41. iKote SB41 can be brush or roller applied to the surface. Commence further activities only after the primed surface becomes touch dry. If the primer area has been left open for longer than 24 hrs, 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 levels. This is to ensure that the overlap edges are never against the flow or water. Corners should be prepared with a sand cement mixed corner fillet or a preformed fillet. A coat of liquid membrane is required if the corner fillet cannot be placed. Corner should be treated with the 300mm reinforcement strip of iStik 100XPE which is laid first. On a circular area, the edges shall be 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 of the first 5 cm of the membrane and stick the top portion. Reroll the membrane on the core until the adhered area. Slowly pull the release membrane off for a length of 20mm and press the membrane on to the surface. While pressing, care should be taken to press the center and then push towards the sides. This method helps in avoiding the entrapped air and ensures 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.
For double layer application, the membranes shall be laid with staggered overlaps to ensure the waterproofing

iStik 100XPE should be protected from subsequent construction activities with iShield or a protection membrane from the iStik range immediately after application of the membrane. The protection board can either be spot bonded with iBond N20 or the 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 the Innobit Technical Department for the relevant drawings.

IMPORTANT GUIDELINES

- Application of the protection course (Board/membrane/screed) is recommended to be done immediately over the iStik 100XPE membrane. In situations where the application gets delayed due to certain unavoidable site activities, then it is recommended that the applied membrane is temporarily protected by a 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 tacky at high temperatures, which makes the application difficult. Membrane application in hot climatic regions during the summer months shall be done during the early morning or late evening.
- Minor wrinkles on the surface of the membrane does not affect the integrity of the waterproofing
- For application in submerged structures, contact the Innobit Technical team prior to application.
- iStik 100XPE 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 by the use of a hot air blower or any other suitable means to increase the temperatures.

PACKAGING

iStik 100XPE 1.5mm	1m x 20m x 1.5mm

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 AND 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 in critical situation.

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