

iSTIK™ 120PE

PE-BACKED, BITUMINOUS, SELF-ADHESIVE MEMBRANE

DESCRIPTION

iStik 120PE 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 HDPE film to form a self-adhesive membrane. iStik 120PE is used for the protection of below ground concrete structures against the ingress of water and moisture. iStik 120PE conforms to BS 8102 standards.

RECOMMENDED APPLICATIONS

iStik 120PE is best suited for protection of below grade concrete structures. The membrane is used for both damp-proofing and waterproofing applications. It is ideally suited for:

- Underpasses and tunnels.
- Retaining walls and foundations.
- Lift pits and buried concrete structures.
- External side of tanks.
- As DPC layer under block work for mitigating rising dampness

FEATURES & BENEFITS

- Cold applied: Easy and fast application without torching, increasing site safety.
- Chemical resistance: Withstands corrosive conditions of ground water and soil.
- 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]	E1849-1	1.5/2.0
Surfacing	-	Black HDPE Film
Tensile strength (Membrane) (MD/CD), [N/mm ²]	ASTM D 638	3.0/3.0
Elongation of compound (MD/CD), [%]	ASTM D 412	>1500
Tensile strength (Film) (MD/CD), [N/mm ²]	ASTM D 882	23/23
Elongation at break (Film). (MD/CD). [%]	ASTM D 882	300/300
Tear strength (Film) (MD/CD). [N/mm]	ASTM D 1004	120/120
Crack Bridging ability. [mm]	AMA D 1305	>3
Puncture resistance. [N]	ASTM E 154	>180
Resistance to Hydrostatic Pressure @5 Bar	BS EN 12390	Pass
Water absorption @24hrs, [%]	ASTM D 5147	<0.15
Adhesion strength. [N/mm]	ASTM D1000	
Primed concrete		1.8
Primed Steel		2.0
Self		2.2
Chemical resistance	ASTM D 543	Pass
Application temperature (Ambient), [°C]		10 to 45
Service temperature (Surface), [°C]		-20 to 75

All values given are subject to 5 – 10% tolerance

APPLICATION INSTRUCTION

The application temperature should be between 5°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:

SURFACE PREPARATION

The surface must be clean and structurally sound. Any loose surface should be chipped off and repaired. 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.

PRIMING

All surfaces should be primed with primer iKote SB41. iKote SB41 can be brush applied to the surface. Wait till the primer is touch dry for any further activities. If the primer area has been left open for longer than 2 days, 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 of 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 a 300mm reinforcement strip of iStik 120PE which is laid first. If on a circular area, the edges should 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 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 120PE should be protected from subsequent construction activities with iShield protection board immediately after 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) should be done immediately over the applied iStik 120PE membrane. In situations where the application gets delayed due to certain unavoidable circumstances, it is recommended that the iStik 120PE membrane is temporarily protected by a Geo-textile fleece or by 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 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.
- Minor wrinkles on the surface of the membrane will not affect the integrity of the waterproofing system.
- For application in submerged structures, contact INNOBIT's technical team prior to application.
- iStik 120PE is not recommended 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 100PE 1.5 mm	1m x 20m x 1.5mm
iStik 100PE 2.0mm	1m x 15m x 2.0mm

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 palletized rolls. Shelf life is 12months if stored as per manufacturer's recommendation

HEALTH & SAFETY

Caution should be exercised while applying the product as with any other construction chemical. iStik 120PE contains a tacky bituminous compound that may adhere to human skin. The stains can be removed by washing with a mild detergent soap or a suitable solvent cleaner. Impervious gloves and standard PPE should be used when handling these products. In critical situations seek medical attention. For more details, refer to the product MSDS.

Disclaimer: All technical data of this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control. Please note that because of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields. Information on this data sheet is subject to change without notice and should not be used for writing specification. For additional information on specific applications, please contact INNOBIT. The information contained herein, provides recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted based on the contents of this data sheet, or any verbal advice given, unless there is a case of willful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product. Innobit reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned copies of which will be supplied on request. All values given are subject to 5 – 10% tolerance. #Values achieved within 7 days after casting specimen at 25°C and 50% RH.