

SMARTCARE BITUPROTEK SBS MEMBRANE

WATERPROOFING SOLUTION

SBS modified bitumen based waterproofing membrane.

PRODUCT DESCRIPTION

SmartCare BituProtek waterproofing membrane is an SBS modified non-woven spun bond Polyester rot-proof fabric reinforced bituminous membrane for superior waterproofing. This membrane exhibits excellent mechanical properties, viz., tensile strength, tear strength, puncture resistance, fatigue resistance, and dimensional stability. Specifically designed for use in structures exposed to high temperatures.

KEY FEATURES

- **Structural Flexibility:** The membrane offers excellent flexibility, allowing it to effectively accommodate structural movements within the building.
- **Water and Vapour Resistance:** It provides excellent resistance to both positive water pressure and vapour pressure, ensuring a dry substrate.
- **Tensile and Tear Strengths:** The product is characterized by high tensile and tear strengths, making it robust against physical stresses.
- **Puncture and Fatigue Resistance:** It features high puncture and fatigue resistance, protecting the layer from damage during and after installation.
- **Dimensional Stability:** The membrane maintains good dimensional stability under tension, ensuring it stays in place without significant deformation.

- **Chemical Resistance:** It offers resistance to water-borne chemicals, shielding the structure from aggressive substances carried by moisture.
- **Heat Resistance:** The product provides good heat resistance, allowing it to maintain its performance even when exposed to high temperatures.

PRODUCT BENEFITS



Thermal Resilience



High Physical Durability



Total Moisture Barrier



Adaptive Flexibility

PACKAGING

- 3mm – 1 m x 10m, 30 rolls/ pallet
- 4mm – 1 m x 10m, 23 rolls/ pallet
- 5mm – 1 m x 10m, 16 rolls/ pallet

Availability

Available in two basic finishes.

- Black smooth finish with polyethylene surface for covered applications.
- Natural slate flakes surfacing for exposed application to protect from UV rays.

TECHNICAL PROPERTIES

Properties	Value			
Theoretical coverage	4-6 m ² /L			
Thickness (UEAtc, ASTM D 5147)	3.0mm, 4.0mm, 5.0mm,	4.0mm, 5.0mm	4.0mm, 5.0mm	4.0mm, 5.0mm
Reinforcement (polyester), (UEAtc, MOAT 31)	180g/m ²	200g/m ²	200g/m ²	250g/m ²

TECHNICAL PROPERTIES

Properties	Value			
Softening Point* (R&B) (ASTM D 36)	115 – 125°C			
Penetration* @25°C, 0.1mm (ASTM D 5)	20 – 40			
Tensile strength (l/t), N/5cm UEAtc / DIN EN 12311-1	800/600	850/650	850/650	1100/800
Elongation@break (l/t), % (UEAtc / DIN EN 12311-1)	40/50	45/50	40/60	50/55
Shear resistance at joints (l/t), N/5cm (UEAtc / DIN EN 12311-1)	800/600	850/650	850/650	1100/800
Tear resistance (l/t), N (ASTM D 5147)	450/320	600/500	600/500	600/500
Puncture resistance, N (ASTM E 154)	<700	>1000	>1000	>1100
Resistance to static loading (UEAtc)	Static L3	Static L4	Static L4	Static L5
Resistance to water pressure @5 bar (BS EN 12390)	No leakage			
Water absorption (BSP) (ASTM D 5147)	≤ 0.2%			
Heat resistance @ 80°C (UEAtc)	No flow			
Low temp flexibility (UEAtc, ASTM D 5147)	0 to -5°C to -20°C			
Resistance to ageing (UEAtc, ASTM G 154)	No deterioration			
Dimensional stability (UEAtc, ASTM D 5147)	< 0.3%			

*Tolerance of ± 10 - 20%

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods.

APPLICATION AREAS

Waterproofing/ damproofing membrane in horizontal and vertical applications on the following structures:

- Swimming Pools and water retaining structures
- Basements
- Sunken Slabs
- Terraces, balconies, and patios
- Inverted roofs and parapets
- Airport aprons and ramp areas
- Pile heads
- Concrete foundation and footings
- Bridges and Tunnels

APPLICATION METHOD

1. Substrate Quality and Preparation:

- Inspect the surface conditions
- The concrete surface should be levelled, tough, and should not have hollow areas or potholes.
- Check hollowness by hammering and repair such areas, as well as potholes, using polymer-modified cement sand mortar.
- Allow to cure for at least 72 hours before application of the membrane.
- Clean the surface thoroughly so that it is free from loose dust, particles, laitance, oil, etc. by brooming or vacuuming.

2. Application:

- Apply SmartCare BituShield Primer SB bitumen-based primer as per recommended coverage (4-6 m²/L) by brush, roller, or spray and allow it to dry till tack-free (about 6-8 hours).
- Start the installation of membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps.
- Begin the membrane application by unrolling the membrane and align with the proper markings all over the area. Re-roll halfway and stand on the unrolled portion to prevent shifting.
- Use of a hand-held roofing torch (cylinder-fed propane gas torch) is recommended as it affords good control. Point the torch towards the primed surface and then on the underside of the membrane. Torch till the compound reaches its softening points. The best visual to confirm this is when the embossing on the membrane starts to disappear. Roll the membrane forward while firmly pressing it to the substrate so that it bonds.
- Keep an overlap margin of a minimum of 15 cm between two adjoining membranes for end laps and a minimum of 10 cm for side laps.
- Ensure that a constant flow of bitumen is maintained across the whole width of the roll and that a bead of bitumen is extruded from all edges, which demonstrates that a good seal has been obtained. Excess compound should be smoothed and pressed into the seam using a heated trowel. Any unbonded areas must be lifted and re-torched. Do not attempt to reseal by torching the top surface of the membrane.
- Flashing details are accomplished using cut pieces of membrane in combination with appropriate prefabricated flashing components. All angles and abutments should be sealed with extra care to ensure full bonding. An appropriate flashing membrane shall be lapped with base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant.
- The Bitumen membrane applied all over the terrace must be finished with a coating of aluminum paint for a non-trafficable area. For a foot trafficable area, overlay with concrete screed mortar.

PRODUCT LIMITATIONS

- Do not apply during rain or extreme temperatures.
- Avoid abuses that may lead to puncturing of the membrane.
- Ensure that the product is applied at least 6 inches inside the drainpipe.
- Apply parapet to parapet to envelope the entire building for long-term performance.

STORAGE CONDITIONS

Membrane rolls, whether loose or on pallets, must be stacked vertically and stored in a shaded area. They should be covered with a thick fabric and tied securely to minimize exposure to sunlight and UV rays. Pallets must not be stacked on top of each other, and the membranes should be protected from all sources of heat and extreme temperatures. Additionally, ensure naked flames are kept away from gas cylinders and exercise extreme caution when using torches near combustible materials.

SHELF LIFE

The shelf life of the product is 12 months when stored according to the recommended guidelines. Excessive exposure to sunlight, UV radiation, and other heat sources will result in considerable deterioration of the product quality and a reduction in its shelf life.

SAFETY PRECAUTIONS

- Always wear protective gloves, goggles, and clothing during mixing and application to prevent skin or eye irritation.
- Avoid direct contact with skin or eyes; in case of contact, wash the affected area with plenty of clean water.
- If inhaled, move the affected person to fresh air immediately and seek medical advice if discomfort persists.
- Ensure proper ventilation at the site of application to avoid inhalation of fumes.
- Keep away from heat, sparks, and open flames. Do not smoke during handling.

CERTIFICATIONS

SmartCare BituProtek SBS Membrane complies with UEAtc, ASTM D 5147, UEAtc, MOAT 31, ASTM D 36, ASTM D 5, UEAtc / DIN EN 12311-1, ASTM E 154, BS EN 12390 and UEAtc, ASTM G 154.

DISCLAIMER

The information provided in this Technical Data Sheet is based on laboratory tests, industry practices, and practical application experience. However, actual site conditions may vary and are beyond the manufacturer's control. Asian Paints makes no warranties, expressed or implied, and shall not be liable for any loss or damage resulting from improper usage, handling, or non-compliance with the recommended guidelines. Users are advised to test the product for suitability before full-scale application.