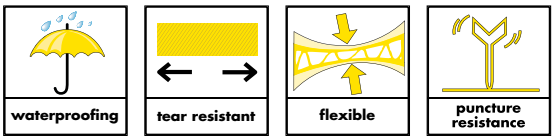
Bituplus P

APP modified bituminous waterproofing membrane

Plastomeric membrane with excellent heat & UV resistance and waterproofing properties

CHARACTERISTICS

- Excellent resistance to positive water & vapor pressure
- Good heat resistance
- Good dimensional stability under tension
- Can accomodate structural movements because of excellent flexibility
- High puncture and fatigue resistance
- High tensile and tear strengths
- Resistant to water borne chemicals



DESCRIPTION

Bituplus P membrane is a plastomeric waterproofing membrane, manufactured from a rich mixture of bitumen and selected APP (Atactic Poly Propylene) polymers blended together to obtain excellent heat & UV resistance and waterproofing properties. The polymerized bitumen is coated on to a dimensionally stable reinforcement core of non woven spun bond polyester rot-proof fabric.

FIELDS OF APPLICATION

Bituplus P is used as a waterproofing membrane on the following structures:

- inverted roofs & parapets
- terraces, balconies & patios
- sunken slabs
- bridges & tunnels
- concrete foundations & footings
- basements

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m^2/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. The primer promotes the adhesion between the membrane and the concrete surface.

Alignment

start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the lap. All overlaps at the membrane seams shall be installed so as to have “up” slope laps over “down” slope lap. Begin membrane application by unrolling the roll of Bituplus P membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

Torching

Bituplus P membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane

flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the surface.
CAUTION: do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Up stand
Flashing details are accomplished using cut pieces of Bituplus P membrane in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the 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 (Bitumastic)*.

STANDARDS
Bituplus P membranes are tested and conform to the requirements of UEAtc 2001 and ASTM standards.

STORAGE & SHELF LIFE
Bituplus P membrane rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY
Bituplus P membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY

Bituplus P	1m x 10m, wt 40kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail

 # Approximate weight

TECHNICAL SPECIFICATION

PROPERTIES	VALUES		TEST STANDARDS
Product	4180	4200	
Thickness, mm	4.0	4.0	DIN EN 1849-1
Mass per unit area, [kg/m^2]	4.0-4.3	4.0-4.3	DIN EN 1849-1
Reinforcement [polyester], [g/m^2]	180	200	EN 29073-1
Coating asphalt	Asphalt atatic poly propylene polymer modified asphalt		
Softening point [R&B], [°C]		>140	ASTM D 36
Penetration @25°C, [0.1mm]		12-25	ASTM D 5
Tensile strength [L/T], [n/5cm]	800/600	850/650	DIN EN 12311-1
Elongation @Break [L/T], [%]	40/50	40/50	DIN EN 12311-1
Tear resistance (L/T), [N]	160/180 >400/ 300	180/200 >500/ 400	DIN EN 12310-1 ASTM D 5147 / D 4073
Resistance to static loading	Static :L_{25}		DIN EN 12730
Hydrostatic pressure @5bar [50m]	No leakage		BS EN 12390 (part 8)
Water absorption [BSP], [%]	< 0.2		ASTM D 5147
Heat resistance @120°C	No flow		DIN EN 52 123
Low temperature flexibility @ 0°C	No crack		ASTM D 5147
Dimensional stability, [%]	< 1		ASTM D 6222
VOC [g/L]	<50		ASTM D3960 / D2369

All values given are subject to 5-20% tolerance

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