SBS Modified Bitumen Waterproof Membrane for Road-Bridge

Description

The bitumen are modified by thermoplastic elastomer (Styrene Butadiene Styrene), then reinforced with heavy duty polyester felt, finished with sands on the upper surface and polyethylene film or sands on the lower side. The road-bridge application design allows binder course to be applied on the membrane top at a high temperature without the risk of being damaged, shrinking or punctured. It withstands mechanical stress laying of road surfacing and when vehicle traffic in service. The excellent adhesivity and flexibility make it to adapt and move with the decks as they move and flex.

Features

- Excellent mechanical strength without breaking or cracking during installation and when in service.
- Superior adhesion to concrete underneath and to binder course on top, adaptability to deformation, no slopping or sliding in service
- Resistance to high temperature, no damage during binder course installation
- High mechanical strength and puncture resistance to allow for paving equipment to be driven and parked
- Resistance to water and salt solutions, and to freeze-thaw cycles

Uses

- Waterproof engineering for highway, airports, railway, bridges, parking lots
- New or renovation concrete reinforced bridges
- Dynamic load engineering projects

Products specification

Reinforcement	Polyester felt
Thickness, mm	3,5, 4.5
Width, mm	1000
Length, m	7,5, 10
Upper surface materials	sands
Lower surface materials	PE film or sands

Technical data: Executive Standard JC/T974-2005

No	Item		Index
1	Soluble content , g/m^2 ≥	3.5 mm	2400
		4.5 mm	3100
2	Bitumen layer thickness on lower side, mm≥	3.5 mm	1.5
		4.5 mm	2.0
3	Thermal resistance, 115°C		No drift, no flow, no dripping
4	Low temperature flexibility, -25°C		No crack
5	Tension at maximum peak, N/50mm≥		800
6	Elongation at maximum peak, %≥		40
7	Thermal ageing	Retention of tension, %≥	90
		Retention of elongation, %≥	90
		Low temperature flexibility, -20°C	No crack
		Dimension change rate, %≤	0.5
		Mass loss rate, %≤	1.0
8	Oil permeability, Pieces, ≤		1
9	Salt resistance	Mass increasing rate %≤	1.0
		Retention of tension, %≥	90
		Low temperature flexibility, -20°C	No crack

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10	Shear strength at 50°C, MPa ≥	0.12
11	Adhesivity strength at 50°C, MPa ≥	0.05
12	Permeability resistance after hot rolling, 0.1MPa * 30 min	Impermeable
13	Joint deformation capacity, 10000 cycles	No damage

Packing

Roll size: 1m x 7.5m or 10m
Rolls per pallet: 25 rolls/pallet more or less

Application instructions

Surface Preparation: Substrates need to be clean, smooth, dry (Moisture <9%), no grit and free of sharp edges, loose or foreign materials, oil, grease and other materials that may damage the membrane. All surface voids greater than 5mm width, shall be properly filled with an acceptable fill material and level it.

Priming: Prior to membrane laying, substrate treating agent need to be brushed evenly and completely cover all laying places.

Torch-on application: Position the membranes on the site. The membrane is cut to shape by means of a knife. There should be side laps of 100mm and end laps of 150mm. Overlaps shall be sealed by torch. After the heating, apply pressure over the surface using a suitable roller to promote adhesion. A thorough inspection is required after application to insure there is no air bubble, no falling away and etc.

Storage

Inclination and lateral placement during transportation should be avoided. Be stored in well-ventilated places protected from sunlight and raining. The temperature in stored areas can not be higher than 50° C. It can not be put in more than two levels.

The normal shelf life is 1 year.

Safety precautions

Do not work in a rainy or snowy day, or heavy wind (above 5 grade); Unsuitable for installation when ambient temperature below 0°C.

If it rains or snows in the construction, protective action to the laid membrane is a must.

Safety protection facilities and articles shall be well prepared, fire-fighting equipment shall be deployed according to regulations.