

BITUPLUS PG

APP Modified Double Reinforced Waterproofing Membrane

BITUPLUS PG is a range of high performance double reinforced APP modified bituminous membrane for the waterproofing of concrete bridge decks and slabs and is designed to withstand high thermal shock while remaining dimensionally stable. BITUPLUS PG membranes are made from non-woven polyester and fiberglass mat, which are saturated and coated with a homogenous thermoplastic blend of Atactic Poly Propylene, distilled bitumen and stabilizers. The mixture is carefully produced under controlled conditions to ensure its stability at high temperatures.

CHARACTERISTICS

- ▶ Suitable for heavy-duty application.
- ▶ Excellent resistance to puncture.
- ▶ Exceptional dimensional stability under pressure.
- ▶ Extreme tolerance to thermal shock.
- ▶ Impermeable to water and vapor.

DOUBLE REINFORCEMENTS

The membrane is produced with two cores. The non-woven polyester core is placed slightly over the center of the membrane. This careful positioning of the reinforcing cores enables the membrane to withstand high dynamic stresses transmitted by the substrate, superior puncture resistance and maintain shape stability. The membrane derives its strength from the central cores. The non-woven polyester core and the glass fiber core, which are juxta positioned to enhance the resistance of dynamic stress, thermal shock, puncture and shape stability.

FIELDS OF APPLICATION

BITUPLUS PG membranes are specially produced for applications such as waterproofing protection of concrete bridge decks, roofs, multi-storey car parks and other applications that demand an exceptionally stable membrane.

APPLICATION INSTRUCTION

The application procedure may vary slightly depending upon site conditions. However, given below are the general guidelines:

Surface Preparation

Clean the surface thoroughly of all loosely adhering particles. Sharp protrusions if any are to be removed. Dampness or dew settled on the concrete surface is to be removed and brought to a dry condition.

Priming

Apply a coat of POLYPRIME SB (Solvent based bitumen primer) on to a clean, dry and smooth surface. Refer primer data sheet for further details.

Alignment

Unroll and align BITUPLUS PG and re roll correctly before torching. Overlap should be a minimum of 100 mm.

Torching

Use gas burner to heat substrate and the underside of BITUPLUS PG. Embossing on the lower face of the membrane allows a fast and safe laying. When embossing disappears, after torching the membrane is ready to stick. Roll forward and press firmly against the substrate to bond.

Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Excess compound should be smoothed and press into seam using hot trowel.

Up stand

All angles and abutments should be sealed with extra care to ensure full bondage. Seal the edges well into the grooves and protect with POLYSEAL PS or equivalent polysulphide sealant.

EXPOSED APPLICATIONS

Use Mineral membranes (BITUPLUS G4140) for exposed type applications, flashing details on up-stands and parapets. This type of self-protected membrane is produced with a layer of natural slate flakes embedded on the upper surface. The layer of slate and the positioning of the fiberglass, at below it, provide enhanced protection from UV and retards ageing.

STORAGE

BITUPLUS PG should be stored in a clean and covered area. Rolls should not be stacked on top of one another.

SAFETY PRECAUTION

Any naked flame should be kept away from the gas cylinders. When ignited the torch should be watched at all times. The torch should not be on the finished roofing. Extreme care should be taken when working near combustible materials or items, which might be scorched by the gas flame.

DISPOSAL

BITUPLUS PG is non-hazardous, non-flammable and therefore can be disposed into any regular disposal area. However, it should be disposed only after wrapping with paper, plastic or cloth as the modified bitumen has a tendency to soften under heat and pressure which would make further handling very tough.

HEALTH & SAFETY

BITUPLUS PG contains a tacky bitumen compound which, while applied can stick to human skin. Such stains can be removed by using a cloth dipped in a light solvent. In case the affected area is a sensitive area it is advised medical attention should be given.

SUPPLY

BITUPLUS PG	1m x 10m,	wt 50kg [#]
BITUPLUS G4140	1m x 10m,	wt 45 kg.
POLYPRIME SB	20 lt. & 200 lt.	
BITUMASTIC	20 kg.	

*Refer to website for TDS # Approximate weight

TECHNICAL SPECIFICATION

PROPERTIES	VALUES			TEST STANDARDS
Product	P4000G, P5000G	P4200G, P5200G	P4250G, P5250G	
Thickness of membrane(mm)	4.0, 5.0	4.0, 5.0	4.0, 5.0	DIN EN 1849-1
Mass per unit area, kg/m ²	4.1-4.3 5.1-5.3	4.1-4.3 5.1-5.3	4.1-4.3 5.1-5.3	DIN EN 1849-1
Reinforcement core,	180 g/m ² non-woven polyester & 60 g/m ² fiberglass mat.	200 g/m ² non-woven polyester & 60 g/m ² fiberglass mat.	250 g/m ² non-woven polyester & 60 g/m ² fiberglass mat.	DIN EN 1849-1
Roll size	1m x 10m			DIN EN 1849-1
Coating Asphalt Softening Point (R&B), °C Penetration at 25°C, 0.1 mm	Styrene Butadiene Styrene Polymer Modified Asphalt > 150 15-25			ASTM D 36 ASTM D 5
Tensile Strength, N/5cm	Long 800 Trans 600	Long 850 Trans 650	Long 1100 Trans 800	DIN EN 12311-1
Elongation (Membrane), %	Long 40 Trans 50	Long 40 Trans 50	Long 40 Trans 50	DIN EN 12311-1
Tear strength	Long 180 Trans 200	Long 200 Trans 220	Long 220 Trans 240	DIN EN 12310
Puncture Resistance	Static : L ₂₅ Dynamic : L ₁₀			DIN EN 12730
Heat Resistance at 120°C	No Flow			DIN EN 52 123
Water absorption, %	< 0.20			ASTM D5147
Dimensional stability	< 0.1%			DIN EN 1107-1
Hydrostatic water pressure	Nil @5 bar			BS EN 12390
Environmental resistance	Conforms			ASTM D 543

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly 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 on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

Manufactured in G.C.C.

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