APP BITUPLAST Smooth

APP Modified Bitumen Waterproofing Membrane
With Composite Polyester Reinforcement.

THE PRODUCT

BITUPLAST is a Plastomeric waterproofing membrane manufactured in an advanced continuous calendaring process by saturating and coating a heavy duty composite carrier with a waterproofing compound made of a special grade of bitumen, which is modified with APP polymers.

While the APP polymers enhance the thermal, mechanical, and aging properties of the membrane compound, the mechanical characteristics of **BITUPLAST** are established by the composite carrier made of non-woven Polyester armoured with fiberglass filaments, which acts as the reinforcement that provides the membrane with the profound mechanical properties of the Polyester and the prominent dimensional stability of Glassfiber mat.

The upper surface of **BITUPLAST** is covered with an anti-adhesive finish material while the lower surface is laminated with a thermo-fusible polyethylene film.

USES

BITUPLAST can be used for roofing & waterproofing applications with high dimensional stability requirements and subjected to considerable mechanical stresses & weathering conditions.

BITUPLAST is a multi purpose waterproofing membrane particularly recommended in single or multi-layer systems for the following applications:

- Flat and sloped ballasted roofs.
- Underground structures waterproofing.
- Re-roofing works.
- Wet areas and mechanical rooms waterproofing.

MAJOR FEATURES

- **Enhanced Isotropic Mechanical Properties** presented by:
  - Good tensile strength, tear and puncture resistance.
  - Significant dimensional stability.
  - Ideal longitudinal & transverse elongation.
- **Enhanced Chemical Resistance** to basic solutions found in the soil and rain water.
- **Good Performance** under a wide range of temperature fluctuation, (from -5°C to 150°C)

SURFACE FINISH

The lower surface of **BITUPLAST** is laminated with a Polyethylene film while the upper surface is covered with one of the following surface finish materials:

- Fine Sand — **BITUPLAST – S/E**
- Polyethylene Film — **BITUPLAST – E/E**
- Mineral Slate Chips or Special Granules (Refer to **BITUPLAST Mineral** separate TDS)

APPLICATION

BITUPLAST is usually applied by using a propane torch or a hot air generator as well as by mechanical fastening. It can also be applied using special adhesives in cold or hot applications. The substrate surface must be clean, dry, smooth, and free from any irregularities. According to the surface conditions, a coat of BituNil primer maybe required prior to the application of the membrane.

BITUPLAST can be applied to the substrate fully bonded, semi bonded or loose laid, The method of adhesion to the substrate shall be decided according to the waterproofing system design. Side laps should be from 8-10 cm, while end laps should be from 12-15 cm. For more information on application refer to BituNil application guide.

STORAGE & HANDLING

BITUPLAST rolls should be kept in an upright position in a flat, properly ventilated and sheltered storage area.

SUPPLY DATA & PALLETISING

Group 100	Group 105	Thickness *	Standard Roll Size	Rolls / Pallet	
				Group 100	Group 105
200	205	2mm	1M x 10M	28	28
300	305	3mm	1M x 10M	28	28
400	405	4mm	1M x 10M	23	23
500	505	5mm	1M x 8M	23	23

**Thickness tolerance as per UEAtc. Directives for Group 100 and UEAtc. ± 5% for Group 105*

Loading Capacity: 20 pallets / 20' Container

The above quantities are indicative only and may be subject to changes in order to comply with transport limitations according to the final destination of the product.

BituNil membranes are made of non-polluting substances, therefore are safe products during production, application and use.

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APP Modified Bitumen Waterproofing Membrane

C: Composite Polyester Reinforcement

CP: Low Wt. CS: Medium Wt. CX: High Wt. CZ: Heavy Duty .

PROPERTIES		TEST	UNIT	TEST METHOD	TOLERANCE	BITUPLAST CS
Dimensional Properties		Thickness	mm	EN-1849-1	± 5%	4
		Weight (Mass Per Unit Area)	kg/m2	EN-1849-1	± 10%	-
		Determination Of Width	m	EN-1848-1	± 1%	1
		Determination Of Length	m	EN-1848-1	± 1%	10
		Straightness (Ortometry)	mm	EN-1848-1	-	± 10
Compound Properties		Softening point (R&B)	° C	ASTM D- 36	Min.	150
		Compound Elongation	%	UNI 8202/8	± 15%	-
Membrane Properties	Mechanical properties	Tensile Strength - Longitudinal	N/50mm	EN-12311-1	± 20%	900
		Tensile Strength - Transverse	N/50mm	EN-12311-1	± 20%	550
		Elongation At Break - Longitudinal	%	EN-12311-1	±15	30
		Elongation At Break - Transverse	%	EN-12311-1	±15	35
		Tearing Strength - Longitudinal (Nail-Shank)	N	EN-12310-1	± 30%	200
		Tearing Strength - Transverse (Nail-Shank)	N	EN-12310-1	± 30%	250
		Tensile Tear Resistance - Longitudinal	N	ASTM D- 5147 . D 4073	± 30%	800
		Tensile Tear Resistance - Transverse	N	ASTM D- 5147 . D 4073	± 30%	400
		Resistance to Static Loading	Kg	EN 12730 Method A	Min.	20
		Dynamic Puncturing (Impact Resistance)	mm	EN 12691 Method B	Min.	600
	Thermal Properties	Flow Resistance At Elevated Temprature	° C	EN-1110	Min.	110
		Flexability At Low Temprature (1)	° C	EN-1109	-	-10 to - 5
		Dimensional Stability	%	EN-1107-1	Max.	±0.3
		Water Impermeablility - Watertightness at Low pressure	60 Kpa	EN-1928 Method A	-	Passed
		Water Impermeablility - Watertightness at High pressure (2)	Kpa	EN-1928 Method B	Min.	300
	Miscellaneous Properties	Water Absorption	%	ASTM D-5147	Max.	< 1
		Vapour Permeability	µ	EN 1931	-	40000
		Fatigue resistance on cracks	200 cycles	UNI 8202/13	-	Passed
			500 cycles			Passed
		Shear Resistance Of joints - Longitudinal	N/50mm	EN-12317-1	± 20%	900
		Shear Resistance Of joints - Transverse	N/50mm	EN-12317-1	± 20%	550
		Thermal Ageing in air (in oven 28 days at 70°C)	-	UNI 8202 /26	-	Passed
		Ageing Due To Atmospheric Agents (U.V Test weathering)	-	ASTM G 53 UNI 8202/29	-	Passed
		Fatigue resistance at Joints	200 cycles	UNI 8202/32	-	Passed
			500 cycles		-	Passed
		Fire Classification - Extemal Fire Performance	Class	EN 13501-5/ ENV 1187	-	F Roof
		Reaction to fire	Class	EN 13501-1	-	E
		Adhesion Of Granules	%	EN-12039	Max.	-
		Adhesion To Concrete (Torch Applied)	N/ 50mm	Pelage UEAtc	-	20
		Resistance to root Penetration	-	EN 13948	-	NPD
Supply Data		weight	kg/m2	-	-	3 to 6
		Thickness	mm	-	-	2 to 5
		Roll Length	M	-	-	10
		Roll Width	M	-	-	1
		Surface finish (E: Polyethylene film S: Sand SL:Slates GR: Granule)				
		Upper Surface Finish	-	-	-	S or E
		Lower Surface Finish	-	-	-	S or E

The declared average values represent the best performance achieved at the present state of our knowledge, BituNil S.A.E reserves the possibility to change, without warning, the technical characteristics in order to make the product more responding to the application requirements. The choice of the type of membrane for the kind of use is at the purchaser's discretion .

Tolerances for the above values if not mentioned are according to the UEAtc dircetives.
(1) Exact value depends on thickness of the product.
(2)Deviating from the standard method , The assessment is made in 1 Hour test 4mm or 4.5Kg/m2 products.

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