



SINCE 1934

TECHNO **BTG**

TECHNOLOGY OF INSULATING MATERIALS



BITUPAK

PPO

APP MODIFIED WATERPROOFING
MEMBRANE WITH NON-WOVEN
REINFORCED POLYESTER

THE WISE CHOICE



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Description

Bitupak (PPO) PET is a plastomeric waterproofing membrane manufactured in an advanced continuous calendaring process by saturating and coating a synthetic carrier a waterproofing compound made of special grade of bitumen, modified with APP polymers. While the modifiers enhance the thermal, mechanical, and aging properties of membrane compound, the mechanical characteristics of **Bitupak (PPO)** is produced using the non-woven continuous filament spun-bond Polyester carrier which acts as the reinforcement that provides the membrane with its particular tensile strength, tear resistance, puncture resistance and elongation properties.

Major Features

- Perfect U.V. resistance.
- Improved chemical resistance to acidic and alkaline solutions.
- Enhanced thermal resistance under a wide range of temperature fluctuation.
- Adequate isotropic mechanical properties.
- Absolute impermeability to water.

Uses

Bitupak (PPO) membranes are used in general purposes as general purpose waterproofing membranes in applications subject to moderate mechanical stresses in single or multi-layer systems for a variety of waterproofing requirements.

Bitupak (PPO) membranes are particularly recommended for the following Areas of Applications :

- Roofing or re-roofing works for sloped and flat protected roofs.
- Waterproofing of wet areas, mechanical rooms and terraces.
- Waterproofing of underground structures.

Surface Finish

The lower surface of **Bitupak (PPO)** is laminated with a thin Polyolefinic film (Sacrifice Layer) while the upper surface is covered with Polyethylene film or Mineral Slates or Sand.

White Fine Sand



HDPE Film



Mineral slates



White



Grey



Green



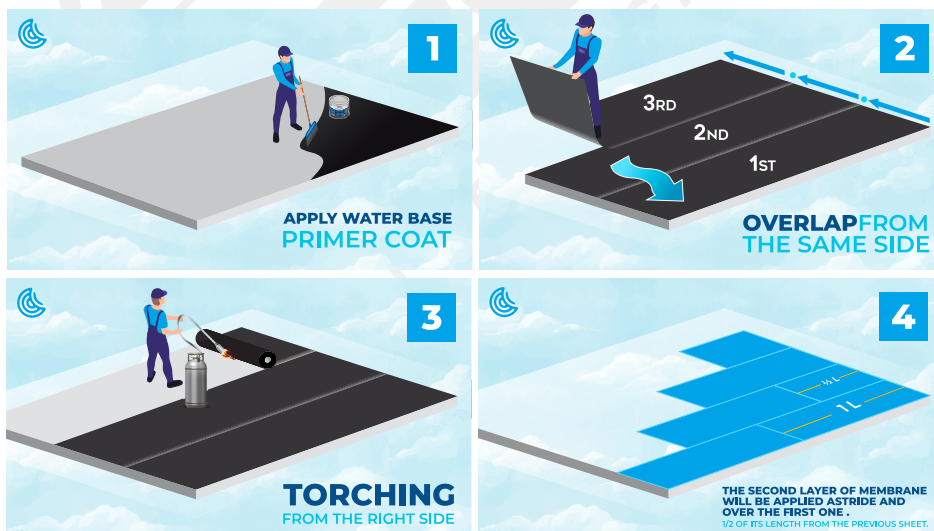
Red



Black

Method of Application

Bitupak (PPO) membranes are applied by using a propane torch or by mechanical fastening. The substrate surface must be clean, dry, smooth, and free of any irregularities. According to the surface conditions, a coat of water base primers may be required, prior to the applications of the membranes. **Bitupak (PPO)** can be applied to the substrate fully bonded, semi bonded or loose lay, and the method of adhesion to the substrate shall be decided according to the waterproofing system design. Side laps should be from 12 – 15 cm. For more information on application refer to the **TECHNOBIT** Application Guide.



BITUPAK

Storage & Handling

Bitupak (PPO) rolls should be kept in an upright position in a flat, properly ventilated and sheltered storage area.

Bitupak (PPO)

APP modified waterproofing membrane with non-Woven Reniforced Polyester

بيتوبك (PPO)

شرائح عازلة من البيتومين المعدل بال APP مسلحة بألياف البولي إستر غير المنسوج

Properties الخصائص	Test الاختبار	Unit وحدة القياس	Test Method طريقة الاختبار	Typical Values القيم النموذجية	
Dimensional Properties خصائص الأبعاد	Thickness السمك	mm	EN-1849-1	3 4	
	Width العرض	m	EN-1848-1	1	
	Length الطول	m	EN-1848-1	10	
	Straightness درجة إسواء السطح (الاستقامة)	mm	EN-1848-1	± 5	
Compound Properties خصائص الخليط البيتوميني	Softening point (R&B) درجة اللينة	° C	ASTM D- 36	≥ 150	
	Penetration @25 °C درجة الغرز عند 25 ° مئوية	dmm	ASTM D-5	25 (±5)	
	Penetration @60 °C درجة الغرز عند 60 ° مئوية	dmm	ASTM D-5	75 (±20)	
Mechanical Properties الخصائص الميكانيكية	Tensile Strength (MAX) مقاومة الشد القصوى				
	Longitudinal "طوليا"	N/5cm	EN-12311-1	550 (±20%)	
	Transverse "عرضيا"	N/5cm	EN-12311-1	300 (±20%)	
	Elongation @ Break أقصى معدل للإستطالة				
	Longitudinal "طوليا"	%	EN-12311-1	10 (± 5)	
	Transverse "عرضيا"	%	EN-12311-1	10 (± 5)	
	Tearing Strength (Nail-Shank) مقاومة التمزق				
	Longitudinal "طوليا"	N	EN-12310-1	≥ 120	
	Transverse "عرضيا"	N	EN-12310-1	≥ 140	
	Tensile-Tear Resistance مقاومة التمزق - بطريقة الشد				
	Longitudinal "طوليا"	N	ASTM D- 5147 . D 4073	≥ 120	
	Transverse "عرضيا"	N	ASTM D- 5147 . D 4073	≥ 140	
	Resistance to static loading مقاومة الإختراق الإستاتيكي	KG	EN12730	≥ 5	
	Resistance to Impact loading مقاومة الإختراق الديناميكي	mm	EN12691	≥ 800	
	Thermal Properties الخصائص الحرارية	Flow resistance @ Elevated Temperature الثبات عند درجات الحرارة العالية	° C	ASTM D-5147, EN-1110	110 (-10)
		Cold Temperature Flexibility المرونة عند درجات الحرارة المنخفضة	° C	ASTM D-5147, EN-1109	0 to +2
		Dimensional Stability ثبات الأبعاد			
		Longitudinal "طوليا"	%	EN-1107-1	-0.4
		Transverse "عرضيا"	%	EN-1107-1	+0.4
		Miscellaneous Properties خصائص أخرى	Tightness Water مقاومة نفاذية الماء	60 Kpa	EN-1928:2000
Water Absorption درجة امتصاص الماء	%		ASTM D-5147,UNI 8202/22	≤ 0.15	
Vapour Permeability نفاذية بخار الماء	μ		UNI 8202/23 , EN1931	40000	
Fatigue resistance on cracks مقاومة الكلال فوق الشقوق	500 cycles 200 cycles		UNI 8202/13	- Passed	
Joints Tensile Strength مقاومة الشد عند مناطق التراكب					
Longitudinal "طوليا"	N/5cm		EN-12317, UNI 8202/30	Equal to membrane	
Transverse "عرضيا"	N/5cm		EN-12317, UNI 8202/30	Equal to membrane	
Thermal Ageing in air (In oven 28 days at 70 ± 2°C) الاهتراء نتيجة للتعرض لدرجات الحرارة المختلفة (28يوما عند درجة حرارة 70 ± 2 ° م)	-		EN1296, UNI 8202 /26	Passed	
Ageing Due To Atmospheric Agents (Q.U.V Test) الإهتراء نتيجة للعوامل المناخية	-		ASTM G 53 UNI 8202/29	Passed	
Fatigue resistance at Joints مقاومة الكلال عند الفواصل	500 cycles 200 cycles		UNI 8202/32	- Passed	
Adhesion To Concrete (Torch Applied) قوة الالتصاق بالأسطح الخرسانية (تسخين بالباشبورى)	N/5cm		EN-12316	20	
Fire Classification - External Fire Performance تصنيف الحريق - أداء الحريق الخارجي	Class		EN 13501-5/ ENV 1187	F Roof	
Reaction to fire التفاعل مع الحريق	Class		EN 13501-1	E	

- Tolerances for the above values if not mentioned are according to the UEAtc directives.
- Exact value depends on thickness of the product.
- Product Technical specifications may be updated by TechnoBit without prior notice.
- Issue Date of this Technical Data Sheet is **SEPT / 2024**
The Information Provided by This Issue Cancels Any Previous Issues.



ISO 9001

OHSAS 18001

ISO 14001