SINCE 1934

TECHNOBIT

TECHNOLOGY OF INSULATING MATERIALS



GreenSeal

Anti-Root Modified Bitumen Waterproofing Membranes For Roof Gardens and Terraces

THE WISE CHOICE

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Description

GreenSeal SBS is a waterproofing membrane manufactured in an advanced continuous calendaring process by saturating and coating a robust composite carrier with a waterproofing compound made of a special grade of bitumen, which is modified with polymers and special ANTI-ROOT chemical additives. While the polymers (SBS) and ANTI-ROOT additives enhance the thermal, mechanical, aging and root penetration resistance properties of the membrane compound, the mechanical characteristics of **GreenSeal SBS** are established by the composite carrier made of non-woven Polyester armored 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 Glassfibermat.

Major Features

- **Specially designed to resist root puncture.**
- **Ability to resist roots and prevent its penetration without losing any of its premium waterproofing characteristics, Even in direct contact with soil.**
- **Does not transfer any polluting elements or present any algaecide or bactericide effects.**
- **Is used as Flashings for exposed up-stands in roof garden/ plaza decks.**

Uses

GreenSeal SBS is particularly used for roof gardens, terraces, planters, and all waterproofing applications where membrane is subject to root penetration.

Surface Finish

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

- **Polyethylene Film TechnoBit Red – E/E**

Method of Application

1. **GreenSeal SBS** is usually applied by using a propane torch. The substrate surface must be clean, dry, smooth, and free from any irregularities.
2. According to the surface conditions, a coat of **TechnoBit WB TS3** primer maybe required prior to the application of the membrane.
3. **GreenSeal SBS** can be applied to the substrate fully bonded, semi bonded or loose laid, and 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 info on application refer to **TechnoBit** application guide.

Storage & Handling

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

GreenSeal SBS

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Properties الخصائص		Test الإختبار	Unit وحدة القياس	Test Method طريقة الإختبار	Typical Values القيم النموذجية
Dimensional Properties خصائص الأبعاد		Thickness السمك	mm	EN-1849-1	4
		Mass Per Unit Area الوزن للمتر المربع	kg/m²	EN-1848-1	-
		Width العرض	m	EN-1848-1	1
		Length الطول	m	EN-1848-1	10
		Straightness درجة إستواء السطح (الإستقامة)	mm	EN-1848-1	± 10
Compound Properties خصائص الخليط البيتومينى		Softening point (R&B) درجة الليونة	° C	ASTM D- 36	110
		Compound Elongation استطالة الخليط	%	UNI 8202/8	900
Membrane Properties خصائص الغشاء	Mechanical Properties الخصائص الميكانيكية	Tensile Strength (MAX) مقاومة الشد القصوى			
		Longitudinal "طوليا"	N/5cm	EN-12311-1	850
		Transverse "عرضيا"	N/5cm	EN-12311-1	550
		Elongation @ Break أقصى معدل للإستطالة			
		Longitudinal "طوليا"	%	EN-12311-1	40
		Transverse "عرضيا"	%	EN-12311-1	40
		Tearing Strength (Nail-Shank) مقاومة التمزق			
		Longitudinal "طوليا"	N	EN-12310-1	200
		Transverse "عرضيا"	N	EN-12310-1	250
		Tensile-Tear Resistance مقاومة التمزق - بطريقة الشد			
		Longitudinal "طوليا"	N	ASTM D- 5147 . D 4073	750
		Transverse "عرضيا"	N	ASTM D- 5147 . D 4073	400
		Resistance to static loading مقاومة الإختراق الاستاتيكي	KG	EN12730	25
		Resistance to Impact loading مقاومة الإختراق الديناميكي	mm	EN12691	750
	Thermal Properties الخصائص الحرارية	Flow resistance @ Elevated Temperature الثبات عند درجات الحرارة العالية	° C	ASTM D-5147, EN-1110	90
		Cold Temperature Flexibility المرونة عند درجات الحرارة المنخفضة	° C	ASTM D-5147, EN-1109	-5 to -10
		Dimensional Stability ثبات الأبعاد			
		Longitudinal "طوليا"	%	EN-1107-1	± 0.3
		Transverse "عرضيا"	%	EN-1107-1	± 0.3
	Miscellaneous Properties خصائص أخرى	Tightness Water مقاومة نفاذية الماء	60 Kpa	EN-1928:2000	Pass
		Water Absorption درجة امتصاص الماء	%	ASTM D-5147,UNI 8202/22	< 1
		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 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) الاعتراء نتيجة للتعرض لدرجات الحرارة المختلفة (28يوماً عند درجة حرارة 70 ± 2 °م)	-	EN1296, UNI 8202 /26	Passed
		Ageing Due To Atmospheric Agents الاعتراء نتيجة للعوامل المناخية *(Q.U.V Test)*	-	ASTM G 53 UNI 8202/29	Passed
		Fatigue resistance at Joints مقاومة الكلال عند الفواصل	500 cycles 200 cycles	UNI 8202/32	Passed Passed
		Adhesion To Concrete (Torch Applied) قوة الإلتصاق بالأسطح الخرسانية (تسخين بالبلشبوري)	N/5cm	EN-12316	40
		Adhesion Of Granules التصاق الحبيبات	%	EN-12039	-
		Fire Classification - Extemal Fire Performance تصنيف الحريق - أداء الحريق الخارجي	Class	EN 13501-5/ ENV 1187	F Roof
		Reaction to fire التعامل 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 Techinical Data Sheet is **APRIL / 2024**
  The Information Provided by This Issue Cancels Any Previous Issues.

ISO 9001 OHSAS 18001 ISO 14001