INSUGRAND (PES) 0

DESCRIPTION

INSUGRAND (PES) is a Plastomeric Modified Bitumen Waterproofing Membrane manufactured in a superior calendaring process by saturating and coating a polyester carrier with a waterproofing compound made of a special grade of modified bitumen with APP Polymers. Whereas the modifiers boost the thermal, mechanical and aging characteristics of the membrane compound; the non-woven Spun-Bond Polyester carrier establishes the mechanical characteristics as it performs as the reinforcement element that provides the membrane with its significant Tensile Strength, Tear Resistance, Puncturing Resistance and Elongation Properties.

INSUGRAND (PES) upper surface is covered with either PE film or Anti - UV Mineral Slates, while the lower face is laminated with Thermo - Fusible Polyethylene film.

KEY FEATURES

- Good U.V. resistance.
- Superior chemical resistance to alkaline solutions, light acidic solutions and bacteria.
- Superior thermal resistance under a wide range of temperature fluctuation.
- Absolute impermeability to water.
- Outstanding performance with high and low temperature.
- Exposed applications (Mineral Finish).
- Excellent adhesion to any surface.
- Applicable for above and below grades usages.

APPLICATIONS

INSUGRAND (PES) membranes are used for general waterproofing purposes in applications subject to moderate mechanical stresses for a variety of waterproofing requirements, and recommended for the subsequent applications:

- Roofing or re-roofing for single or multi - layer systems, sloped and flat roofs.
- Wet areas, swimming pools and toilets.
- Underground structures.
- Slab on grade.

INSTALLATION

- INSUGRAND (PES) membranes are installed by using propane torch welding as loose laid or fully bonded depending on the waterproofed system design requirements.
- The membrane rolls should be unloaded carefully without throwing.
- The substrate surface should be clean, dry, smooth and free from any irregularities & dust.
- According to the surface conditions; the surface might be in need for a cold applied bituminous primer layer before the membrane installation.
- The Modified Bitumen Waterproofing Membranes should be unrolled and placed in aligned position.
- Side overlap should be from 7 - 10 cm, while end overlap should be from 10 - 15 cm.
- For fully bonded systems, the membranes should be re-rolled without compromising its orientation while installation with propane torch and exposing the lower surface to the flame till the polyethylene film burns and the bituminous mass start melting, consequently creating a heat weld between the membrane and the substrate.
- For seams welding, torching takes place from above by heating the contact line at side & end overlaps then using a trowel to create pressure at the upper membrane to the lower one while avoiding long time flame exposure on the same point.
- For sloping roofs, the membrane should be laid from the lower edge with longitudinal direction of rolls perpendicular to slop direction, as the side lap of the consecutive roll should be placed above the prior one.

SURFACE FINISH

The lower surface is laminated with Polyethylene film, while the upper surface is covered with one of the following surfacing finishing materials:

- Polyethylene Film.
- Mineral Slates "Gray, Green, or Red" .

STORAGE

All Modified Bitumen Waterproofing Membrane should be stored in upright position in dry, flat, ventilated and away from direct sun light storage area.

DELIVERY INFORMATION

Thikness	mm	3,4
Roll Length	M	10
Roll Width	M	1

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APP Modifie Bitumen Membrane With Non-Woven Polyester Reinforcement

TEST	MEASURING UNIT	TEST METHOD	INSUGRAND إنسوجراند	الإختبار
Thickness	mm	EN 1849-1	3, 4	السمك
Width	m	EN 1849-1	1	العرض
Length	m	EN 1849-1	10	الطول
Ortometry (5m Length Specimen)	mm	EN 1849-1	±10	درجة إستواء السطح
Softening point (R&B)	°C	ASTM D- 36	150	درجة الليونة
Penetration @ 25 °C	dmm	ASTM D- 5	20	در جة الإختراق عند ٢٥°مئوية
Penetration @ 60 °C	dmm	ASTM D- 5	80	درجة الإختراق عند ٦٠°مئوية
Tensile Strength (max)				مقاومة الشد القصوى
Longitudinal	N/5cm	ASTM D- 5147	850	طولياً
Transverse	N/5cm	ASTM D- 5147	560	عرضياً
Elongation @ Break				أقصى معدل للإستطالة
Longitudinal	%	ASTM D- 5147	≥45	طولياً
Transverse	%	ASTM D- 5147	≥50	عرضياً
Tearing Strength (Nail-Shank)				مقاومة التمزق
Longitudinal	N	EN 12310-1	170	طولياً
Transverse	N	EN 12310-1	190	عرضياً
Static Puncturing	-	UNI 8202/11	PS-3	مقاومة الإختراق الإستاتيكى
Dynamic Puncturing	-	UNI 8202/12	PD-3	مقاومة الإختراق الدينامكى
Heat Flow	°C	ASTM D-5147, EN 1110	110	الثبات عند درجات الحرارة العالية
Cold Temperature Flexibility	°C	ASTM D-5147, EN 1109	0 ± 2	المرونة عند درجات الحرارة المنخفضة
Dimensional Stability				ثبات الأبعاد
Longitudinal	%	EN 1107-1	-0.5	طولياً
Transverse	%	EN 1107-1	0.5	عرضياً
Impermeability To Water	100 Kpa	EN 1928:2000	Absolute	مقاومة نفاذية المياه
Water Absorption	%	ASTM D-5147, UNI 8202/22	Less than 0.15	درجة إمتصاص الماء
Vapour Permeability	u	EN 1931	40,000	درجة نفاذية بخار الماء
Joints Tensile Strength	N/5cm	EN-12317, UNI 8202/30	Equal to membrane	مقاومة الشد عند مناطق التوصيل
Thermal Ageing in air (in oven at 70± 2°C)	-	EN 1296	4 weeks passed	الإهتراء نتيجة التسخين
Fatigue resistance at joints	200 cycles	UNI 8202/32	Passed	مقاومة الكلال عند الوصلات
Average Loss Of Chips	g/m²	EN 12039	<200	متوسط الفاقد من حبيبات المنيرال
Adhesion To Concrete (Torch Applied)	N/cm	EN 12316	25	قوة الإلتصاق بالأسطح الخرسانية

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