INSUTECH
International Company For Insulation Technology

INSUPRENE (PES)

INSUPRENE (PES) is an elastomeric Modified Bitumen Membrane used for various waterproofing applications. It is manufactured in a high-tech calendaring process, which involves the saturation and coating of a heavy-duty polyester carrier with a SBS elastomer-modified bitumen compound. The SBS modifiers are used to improve the thermal, chemical and ageing properties of the bitumen compound. Meanwhile, the mechanical characteristics such as tensile strength, elongation and tear resistance are boosted by the non-woven polyester carrier which acts as reinforcement to the product.

SURFACE FINISH

The lower surface of the membrane is laminated with a thin thermo-fusible polyethylene 'burn-off' film. The membrane is available with a wide range of upper surface finish options including different colored slates, aluminum foil, sand and polyethylene film.

KEY FEATURES

- Absolute impermeability to water
- High chemical resistance to alkaline solutions, light acidic solutions and bacteria
- Thermal resistance under a wide range of temperature fluctuation
- Excellent U.V. resistance when surface is finished with slates
- Ease of adhesion to a wide variety of surfaces
- Applicable for above and below grade usages.

APPLICATION

INSUPRENE (PES) membranes are used for a wide variety of waterproofing requirements and in applications where the membrane is subject to constant movement and high stresses, such as:

- roofing or re-roofing for single or multi-layer systems
- sloped and flat roofs
- metal decks subject to significant movements
- tunnels, wet areas, swimming pools and toilets
- foundations and underground structures.

STORAGE

All Modified Bitumen Membranes should be stored in an upright position in a dry, flat and ventilated storage area away from direct sunlight.

INSTALLATION

Please refer to the Insutech Applicator Guide for complete instructions on the application of the product.

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TEST	UNIT	TEST METHOD	RESULTS	الإختبار
Cold Temperature Flexibility	°C	ASTM D-5147, EN - 1109	-23 to -27	المرونة عند درجات الحرارة المنخفضة
Thickness	mm	EN 1849-1	4	السمك
Roll Width	m	EN 1848-1	1	العرض
Roll Length	m	EN 1848-1	10	الطول
Straightness	mm	EN 1848-1	± 5	الإستقامة
Softening point (R&B)	°C	ASTM D- 36	120	درجة الليونة
Penetration @ 25 °C	dmm	ASTM D- 5	35	درجة الغرز عند ٢٥° مئوية
Penetration @ 60 °C	dmm	ASTM D- 5	120	درجة الغرز عند ٦٠° مئوية
TENSILE STRENGTH (MAX)				**مقاومة الشد القصوى**
Longitudinal	N/5cm	EN 12311-1	1100	طولياً
Transverse	N/5cm	EN 12311-1	700	عرضياً
ELONGATION @ BREAK				**أقصى معدل للإستطالة**
Longitudinal	%	EN 12311-1	50	طولياً
Transverse	%	EN 12311-1	55	عرضياً
TENSILE TEARING STRENGTH				**مقاومة التمزق**
Longitudinal	N	ASTM D5147 D-4073	700	طولياً
Transverse	N	ASTM D5147 D-4073	500	عرضياً
TEARING STRENGTH (NAIL-SHANK)				**مقاومة التمزق**
Longitudinal	N	EN 12310-1	260	طولياً
Transverse	N	EN 12310-1	340	عرضياً
Resistance To Static Loading	kg	EN 12730	20	مقاومة الإختراق الإستاتيكى
Resistance To Impact	mm	EN 12691	1000	مقاومة الإختراق الديناميكى
Heat Flow	°C	ASTM D-5147, EN - 1110	110	الثبات عند درجات الحرارة العالية
DIMENSIONAL STABILITY				**ثبات الأبعاد**
Longitudinal	%	EN 1107-1	-0.5	طولياً
Transverse	%	EN 1107-1	+0.5	عرضياً
Water Tightness	60 Kpa	EN 1928:2000	pass	مقاومة نفاذية الماء
Water Absorption	%	ASTM D-5147, UNI - 8202/22	≤1	درجة إمتصاص الماء
Vapour Permeability	μ	EN 1931	60,000	درجة نفاذية بخار الماء
Joints Tensile Strength Shear L/T	N/5cm	EN 12317	1100 / 700	مقاومة الشد عند مناطق التوصيل
Thermal Ageing in air (in oven at 70 ± 2°C) for 4 weeks	-	EN 1296	4 weeks passed	الإهتراء نتيجة التسخين
Average Loss of Slates	%	EN 12039	-	متوسط الفاقد من حبيبات المينرال

- Given test results are based on 4mm thick specimens
- Tolerances for all the above values are according to relevant UEAtc Guidelines
- Insutech reserves the right to modify product specifications due to customer request and/or continuous product development without any prior notice
- This product doesn't contain any dangerous substances
- This publication revokes any previous one. Issue. 2/ © 2018

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