

## HELASTOPAN POLYESTER

**(REINFORCED ELASTOMERIC POLYMER-BITUMEN WATERPROOFING MEMBRANE MODIFIED WITH THERMOPLASTIC SBS RUBBER AND POLYOLEFINS)**

A TRADITIONAL MEMBRANE MODIFIED WITH SBS

**Description** HELASTOPLAN, membranes are made up of an “inversion phase” compound of distilled bitumen, selected for industrial use, SBS rubber and polyolefins.

The elastomer, a thermoplastic rubber made up of radial styrene-butadiene copolymer blocks (SBS) forms the continuous polymeric matrix of the compound and the bitumen forms the dispersed phase. The polyolefins, which have higher heat resistant properties, are added to the compound in the form of bitumen-SBS to increase the rigidity of the membrane and to make it easier to apply during the summer months while most of the elastic properties of the bitumen-rubber compound remain unchanged. The ultimate elongation is higher than 1,500%, the flexibility in cold conditions is  $-20^{\circ}\text{C}$  and the high adhesive properties also remain. The compatibility with other bitumen and the peeling strength of the joints is notably higher than that of normal polymer modified bitumen membranes. The membranes are produced in various weights and with various reinforcements.

HELASTOPLAN POLYESTER and MINERAL HELASTOPLAN POLYESTER are reinforced with a composite, high weight, rot-proof, “non woven” polyester fabric, stabilized with fiberglass mat. This reinforcement has a high tensile strength, is flexible and has optimal dimensional stability in hot conditions which reduces the problems of the banana effect and the retraction of head lap joints as it is 2 to 3 times more stable than normal reinforcements in “non woven” polyester fabric.

HELASTOPLAN/V is reinforced with rot-proof fiberglass mat which is strengthened longitudinally and has high dimensional stability properties.

The HELASTOPLAN POLYESTER and HELASTOPLAN/V membranes are coated on both faces with Flamina film, which retracts during torch-on and guarantees the welding of the joints and a fast and reliable adhesion.

Also the underside of MINERAL HELASTOPLAN POLYESTER is coated with Flamina film, while the upper face is protected with hot bonded and pressed slate granules, with the exception of a slate free, lateral overlap strip, protected with Flamina film which melts during torch-on.

**Applications field** The HELASTOPLAN membranes retain the high elastic properties and the optimal resistance to stress at low temperatures of SBS-bitumen membranes combined with a higher rigidity in hot conditions which allows for easier application even during the summer months or in hot climates where there are more problems with the application of SBS-bitumen membranes. The HELASTOPLAN POLYESTER membranes are used in the building trade as a waterproofing element in more difficult situations such as cracking substrates or substrates subject to vibration Both on new work or for refurbishment:

- On all inclined surfaces, on flat, sloping and curved surfaces.
- On different types of surface: cast or prefabricated cement substructures, on metal or wood roofing, on the most common heat insulation used in the building industry.
- For the most varied uses: terraces, flat and sloping roofs, stress structures, foundations, car park roofs, under concrete topping, tunnels, subways and undergrounds.

The high dimensional stability of HELASTOPLAN/V makes the membranes suitable for combining with membranes reinforce

Method of use	Torch Application	Hot Air Applicatio	Nailing
	✓	✓	✓

CE	INTENDED USE OF “CE” MARKING SPECIFIED ACCORDING TO THE AISPEC-MBP GUIDELINES
<b>EN 13707 - REINFORCED BITUMEN SHEETS FOR ROOF WATERPROOFING</b> <ul style="list-style-type: none"> <li>• Under layer or intermediate layer in multi-layer systems without permanent heavy surface protection               <ul style="list-style-type: none"> <li>- HELASTOPLAN POLYESTER 3 mm</li> <li>- HELASTOPLAN POLYESTER 4 mm</li> <li>- HELASTOPLAN/V 2 kg/m<sup>2</sup></li> <li>- HELASTOPLAN/V 3 kg/m<sup>2</sup></li> <li>- HELASTOPLAN/V 4 kg/m<sup>2</sup></li> </ul> </li> <li>• Upper layer in multi-layer systems without permanent heavy surface protection               <ul style="list-style-type: none"> <li>- MINERAL HELASTOPLAN POL. 4,0 kg/m<sup>2</sup></li> <li>- MINERAL HELASTOPLAN POL. 4,5 kg/m<sup>2</sup></li> </ul> </li> <li>• Under heavy protection in multi-layer systems               <ul style="list-style-type: none"> <li>- HELASTOPLAN POLYESTER 3 mm</li> <li>- HELASTOPLAN POLYESTER 4 mm</li> </ul> </li> </ul>	
<b>EN 13969 - BITUMEN DAMP PROOF SHEET INCLUDING BITUMEN BASEMENT TANKING SHEETS</b> <ul style="list-style-type: none"> <li>• Membranes for foundations               <ul style="list-style-type: none"> <li>- HELASTOPLAN POLYESTER 3 mm</li> <li>- HELASTOPLAN POLYESTER 4 mm</li> </ul> </li> </ul>	

Loading Table	Product specifications			Loading in 20' FCL	
	Thickness	m <sup>2</sup> /roll	Rolls/pallet	Pallets	M <sup>2</sup>
Helastoplan Polyester	3 mm	10	30	20	6000
	4 mm	10	24	20	4800
Mineral Helastoplan Polyester	4,0 kg/m <sup>2</sup>	10	27	20	5400
	4,5 kg/m <sup>2</sup>	10	25	20	5000
Helastoplan Fiberglass Reinforced	2,0 kg/m <sup>2</sup>	10	42	20	8400
	3,0 kg/m <sup>2</sup>	10	34	20	6800
	4,0 kg/m <sup>2</sup>	10	27	20	5400

**Finishing**



FLAMINA. Plastic protection film helping prevent coils from sticking to the roll. As it withdraws under the action of the flame right during its installation, it signals the best melting point in order to correctly glue the membrane to the brackets and rises. When not heated, it can be used as a sliding layer.



MINERAL PROTECTION. On the visible face of the membrane, a protective coating made up of slate granules of various colours is hot bonded. This mineral shield protects the membrane from ageing caused by UV rays in the points where it remains intact, preventing blisters and swelling.

			HELASTOPLAN POLYESTER		MINERAL HELASTOPLAN POLYESTER		HELASTOPLAN FIBERGLASS		
Reinforcement	Standard	T	Non woven composite polyester stabilized with fiberglass		Non woven composite polyester stabilized with fiberglass		Fiberglass		
Thickness	EN 1849-1	±0,2 ±12%	3mm	4mm	4,0kg/m <sup>2</sup>	4,5kg/m <sup>2</sup>	2kg/m <sup>2</sup>	3kg/m <sup>2</sup>	4kg/m <sup>2</sup>
Weight									
Roll size	EN 1848-1		1x10m		1x10m		1x20m	1x10m	
Watertightness After ageing	EN 1928 – B EN 1926-1928	≥	60 kPa		60 kPa		60 kPa		
Shear resistance L/T	EN 12317-1	-20%	600/400 N/50mm		-		-		
Maximum tensile force L/T	EN 12311-1	-20%	700/500 N/50mm		700/500 N/50mm		300/200 N/50mm		
Elongation L/T	EN 12311-1	15%	40%/45%		40%/45%		2%/2%		
Resistance to impact	EN 12691 – A		1250 mm		1250 mm		-		
Resistance to Static Loading	EN 12730 A		15 kg		15 kg		-		
Resistance to tearing (nail shank) L/T	EN 12310-1	-30%	160/200 N		160/200 N		70/70 N		
Dimensional Stability	En 1107-1	≤	-0,25/+0,10		-0,25/+0,10		-		
Flexibility to low temp.	EN 1109	≤	-20°C		-20°C		-20°C		
Flow resistance at high temp.	EN 1110	≥	100°C		100°C		100°C		
Reaction to Fire - Euroclass	EN 13501-1		E		E		E		
External fire performance	EN 13501-5		F roof		F roof		F roof		

Composition of membranes →



