

HELASTA POLYESTER MINERAL HELASTA POLYESTER

ELASTOMERIC WATERPROOFING MEMBRANES,
CONTAINING RADIAL STYRENE-BUTADIENE
THERMOPLASTIC RUBBER DISTILLED POLYMER-
BITUMEN

GRANTS **LEED** CREDITS

CATEGORY	CHARACTERISTICS			ENVIRONMENTAL						METHOD OF USE			
ELASTOMERIC	WATERPROOF	REACTION TO FIRE	REAZIONE AL FUOCO	ECO GREEN	ASBESTOS FREE	TAR FREE	CHLORINE FREE	RECYCLABLE	NON DANGEROUS WASTE	EXHAUSTED OIL FREE	TORCH APPLICATION	HOT AIR APPLICATION	NAILING

DESCRIPTION

The prefabricated **HELASTA** membrane, produced with various reinforcements combines ease of application, thermal fusibility and the excellent adhesion of the bituminous products, with the flexibility at low temperatures, mechanical strength and elasticity of synthetic membranes.

HELASTA is a membrane based on a "phase inversion" compound of distilled bitumen for industrial use with a high content of SBS rubber, in which the elastomer constitutes the continuous polymeric matrix and the bitumen the dispersed phase. The thermoplastic rubber which is manufactured from a block copolymer of radial styrene-butadiene-styrene (SBS), gives the material an ultimate elongation of 2,000%, an elastic recovery of 300%, a cold flexibility of -25°C and a resistance to temperatures higher than 100°C, characteristics which are considerably superior to those which can be achieved with ordinary bitumen.

Furthermore, the compound has excellent qualities of adhesion and of compatibility with other oxidised and modified bitumen and it guarantees a long lasting and strong joint with a resistance to peeling which is maintained over time, from 2 to 3 times higher than normal membranes based on polymer modified bitumen.

HELASTA POLYESTER and **MINERAL HELASTA POLYESTER** are reinforced with a high grammage, "non-woven" single strand Spun-bond polyester fabric which is rot-proof, isotropic, thermally fixed, with high mechanical resistance and elasticity.

HELASTA POLYESTER is produced in various thickness values. It is lined on both faces with Flamina, a highly retracting hot-melt film. The film ensures fast and safe laying. **MINERAL HELASTA POLYESTER** is produced in various grammage, with the lower side coated with Flamina, while the upper side is auto-protected with slate granules, which are bonded and hot pressed except for a lateral overlapping strip without slate, protected with a band of Flamina film which melts when torched to weld the joint. The characteristics of the **HELASTA** mem-

branes are notably higher than the limits provided for in the UEAtc Directive of December 2001 regarding two-layer homogeneous bitumen-elastomer SBS reinforced coatings; furthermore, **HELASTA POLYESTER 4** and **MINERAL HELASTA POLYESTER** membranes (4 mm on the selvages) have been granted the I.T.C. Technical Agreement for the single-layer applications too. The Institute, a member of C.N.R., periodically supervises the company's production of certified membranes and the relevant quality control.

APPLICATION FIELDS

The excellent resistance to fatigue of the **HELASTA** membranes, due to the exceptionally high elasticity even at low temperatures, make them suitable for use in the most demanding waterproofing installations: fractional laying surfaces or ones which are subject to cracking and vibrations, even in particularly cold climates are particularly suitable for use as a waterproofing membrane of construction joints to be joined with a torch to waterproof coats in both oxidised and polymer-bitumen.

The long lasting characteristics of mechanical strength and the high resistance to low temperatures makes it possible to use **HELASTA POLYESTER** and **MINERAL HELASTA POLYESTER** membranes as single or multi-layer waterproofing systems in the building industry and civil engineering, both for new constructions and for refurbishing of various typologies:

- On all sloped surfaces: on flat, sloped and curved surfaces
- On different types of laying surfaces: cement laying floors, site-cast or prefabricated, on metal or wooden roofing, on the most widely used thermal insulation systems for the building industry.
- For the most varied uses: terraces, flat and sloping roofs, stretched flexible structures, foundations (even earthquake-proof), car park roofings with under cope in reinforced concrete, waterworks works, tunnels, underground passages, undergrounds and subways.



INTENDED USE OF "CE" MARKING SPECIFIED ACCORDING TO THE AISPEC-MBP GUIDLINES

EN 13707 - REINFORCED BITUMEN SHEETS FOR ROOF WATERPROOFING

- Under layer or intermediate layer in multi-layer systems without permanent heavy surface protection
 - HELASTA POLYESTER
- Upper layer in multi-layer systems without permanent heavy surface protection
 - MINERAL HELASTA POLYESTER
- Exposed single-layer
 - MINERAL HELASTA POLYESTER - 4 mm
- Single-layer under heavy protection
 - HELASTA POLYESTER
- Under heavy protection in multi-layer systems
 - HELASTA POLYESTER

EN 13969 - BITUMEN DAMP PROOF SHEET INCLUDING BITUMEN BASEMENT TANKING SHEETS

- Membranes for foundations
 - HELASTA POLYESTER

CERTIFICATION



Documento di Valutazione Tecnica all'impiego DVT-0008



Technical Approved

TECHNICAL CHARACTERISTICS

	Standard	T	HELASTA POLYESTER		MINERAL HELASTA POLYESTER		
			"Non-woven" composite polyester stabilized with fibreglass		"Non-woven" composite polyester stabilized with fibreglass		
Reinforcement							
Thickness	EN 1849-1	±0,2	4 mm	5 mm	4 mm	-	-
Mass per unit area MINERAL	EN 1849-1	±15%	-	-	-	4.0 kg/m ²	4.5 kg/m ²
Roll size	EN 1848-1	-1%	1x10 m	1x10 m	1x10 m	1x10 m	1x10 m
Watertightness	EN 1928 - B	≥	60 kPa		60 kPa	60 kPa	
Peel resistance L/T	EN 12316-1	-20 N	-		200 N/50 mm	-	
Shear resistance L/T	EN 12317-1	-20%	800/600 N/50 mm		800/600 N/50 mm	750/600 N/50 mm	
Maximum tensile force L/T	EN 12311-1	-20%	850/700 N/50 mm		850/750 N/50 mm	850/750 N/50 mm	
Elongation L/T	EN 12311-1	-15% V.A.	50/50%		50/50%	50/50%	
Resistance to impact	EN 12691 - A		1 250 mm		1 250 mm	-	
Resistance to static loading	EN 12730 - A		20 kg		20 kg	-	
Resistance to tearing (nail shank) L/T	EN 12310-1	-30%	200/200 N		200/200 N	200/200 N	
Dimensional stability L/T	EN 1107-1	≤	-0.30/+0.30%		-0.30/+0.30%	-0.30/+0.30%	
Flexibility to low temp.	EN 1109	≤	-25°C		-25°C	-25°C	
• after ageing	EN 1296-1109	+15°C	-25°C		-25°C	-25°C	
Flow resist. at high temp.	EN 1110	≥	100°C		100°C	100°C	
• after ageing	EN 1296-1110	-10°C	90°C		90°C	90°C	
Reaction to fire Euroclass	EN 13501-1		E		E	E	
External fire performance	EN 13501-5		F roof		F roof	F roof	

Thermal specifications

Thermal conductivity			0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK
Heat capacity			5.20 KJ/K·m ²	6.50 KJ/K·m ²	4.80 KJ/K·m ²	4.80 KJ/K·m ²	5.40 KJ/K·m ²

Compliant with EN 13707 in terms of the resistance factor to steam penetration for reinforced polymer-bitumen membranes, the value of $\mu = 20\ 000$ may be considered, unless declared otherwise.

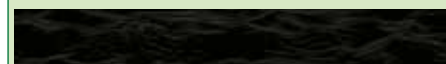
Slated membranes may change colour depending on the storage periods. The colour may change away within 2-3 months for membranes for the colour to their original colour. The colour change is not an aspect of this type of membrane and cannot be the basis for a complaint. The same is true regarding the maintenance of colour and the different colourings that can occur among the variously exposed areas of the covering based on the types of artificial colouring.

the numerous possible uses and the possible interference of conditions or elements beyond our control, we assume no responsibility regarding the results which are obtained. The purchasers, of their own accord and under their own responsibility, must establish the suitability of the product for the envisaged use.

COMPOSITION OF THE MEMBRANE

HELASTA POLYESTER	MINERAL HELASTA POLYESTER

PRODUCT FINISHING



"FLAMINA" PE FOIL. 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.



SELF-PROTECTION WITH SLATE GRANULES. 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.

The figures shown are average indicative figures relevant to current production and may be changed or updated by INDEX at any time without previous warning. The advice and technical information provided, is what results from our best knowledge regarding the properties and the use of the product. Considering

• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

<p>Construction Systems and Products</p> <p>Via G. Rossini, 22 - 37060 Castel D'Azzano (VR) - Italy - C.P.67 T. +39 045 8546201 - F. +39 045 518390</p>	<p>Internet: www.index-spa.com Informazioni Tecniche Commerciali tecom@indexspa.it Amministrazione e Segreteria index@indexspa.it Index Export Dept. index.export@indexspa.it</p>		<p>TOTAL QUALITY index</p> <p>UNI EN ISO 9001</p>	<p>Environmental Management Systems index</p> <p>UNI EN ISO 14001</p>	<p>index "GBC Italia" Associated</p>	
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