



# a.b.e.<sup>®</sup> Construction Chemicals

## Index Helasta P4

### Polyester 4mm

HELASTA/P4 MINERAL HELASTA/P4 AGREEMENT I.C.I.T.E. n. 590/03

#### DESCRIPTION

**Index Helasta P** membrane, combines ease of application, thermal fusibility and the flexibility at low temperatures, strength and elasticity of synthetic membranes. **Index Helasta P** 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 at 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 temperature 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 increases in time, from 2 to 3 times higher than normal bitumen based or polymer modified membranes.

**Index Helasta P** and **Index Mineral Helasta P** are reinforced with a high grammage, non woven fabric of continuous extruded Spunbond polyester which is rot proof, isotropic, resistant to heat and ageing and is extremely strong and elastic. **Index Helasta P** is coated on both faces with Flamina, a film that melts when torched with an optimum retraction, which guarantees a fast and reliable installation.

**Index Mineral Helasta P** is produced with the underside coated with Flamina, while the top face 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** membrane are notably higher than the limits provided for in the UEAtc Directive of January 1984 regarding two-layer homogeneous bitumen-elastomer SBS reinforced coatings, furthermore **Index Helasta P4** and **Index Mineral Helasta P** membranes (4 mm on the selvedge) have been granted the Agrément I.C.I.T.E (Technical Agreement) for the single layer applications (see specifications).

#### USES

Excellent resistance to fatigue of the **Index Helasta P** membranes, due to the exceptionally high elasticity even at low temperatures, make them suitable for use in the most demanding waterproofing installations: fractional substructures or ones which are subject to cracking and vibrations, even in particularly cold climates and in the versions reinforced with polyester non-woven fabric, are particularly suitable for use as a waterproofing membrane of construction joints to be joined with a torch to waterproof the surfaces in both oxidised and polymer-bitumen.

The long lasting characteristics of strength and high resistance to low temperatures makes it possible to use **Index Mineral Helasta P** and **Index Mineral Helasta V** membranes as single or multi-layer waterproofing in the building industry and civil engineering, both for new construction and the betterment of various typologies:

- On all inclined surfaces: on flat, inclined and curved surfaces;
- On different types of surfaces: site-castor pre-fabricated cement substructures, on metal or wooden roofing, on the most widely used heat insulation used in the building industry;
- For the most varied uses; terraces, flat and sloping roofs, stretched flexible structures, foundations (even earthquake-proof), under cope reinforced concrete car park roofing, waterworks and ecological works, tunnels, underground passages and underground subways.

## APPLICATION

The membrane is just one element, which joined with other such elements, form an unbroken layer which alone or with other unbroken layers, forms a waterproof surface.

The membrane is part of an often complex stratigraphy, made up of different types of layers with different functions, which are often discontinuous and interact with each other.

The high quality of the membrane alone is not enough to guarantee the successful implementation or the durability of waterproofing work in time, which are in fact the result of a inseparable combination of planning and the thorough knowledge of the stratigraphic behaviour which makes it possible to choose exactly the right materials for the job with a correct and attentive laying of the same, along with a meticulous attention to detail.

Therefore, we advise the reader to study the laying methods, the behaviour of the materials and the connections between layers in depth, by carefully reading the following Index S.P.A. handbooks: **"Technical specifications", "Application manual", "Composition and analysis of roofing protection systems", "Waterproofing"**, where the various laying systems are described such as, bonding and hot air welding, mechanical fixing, cold bonding with adhesives and hot air welding.

These handbooks also contain valuable information regarding the correct storage methods for the materials. The handbooks are also used for the various levels of training courses which Index organize at its

**Technical Training and Refresher Course Centre**, where it is possible to carry out a more in depth study of application techniques and planning.

## WARNING

- **Index** membranes do not contain coal tar;
- **Index** membranes do not contain asbestos;
- They do not contain dangerous substances as per Italian law 256 of 29 May 1974 and successive modifications and integrations (ref. Ministerial Decree 28 January 1992, enclosure III, section 2).
- With regard to Ministerial Decree of 28 January 1992, article 10 which deals with 'the classification and contents of packaging and labelling of dangerous materials in carrying out directives issued by the Council and Commission of the European Community' the polymer bitumen membrane discussed in this technical data sheet is not obliged to issue a health and safety sheet. However, there is an information card available to anyone who requires it, which deals with correct use of the product.



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**CHRYSO**  
CHEMICAL SOLUTIONS FOR THE  
CONSTRUCTION MATERIALS INDUSTRY  
DATE UPDATED: 12/06/14

TECHNICAL CHARACTERISTICS	HELASTA P4	MINERAL HELASTA P4
Reinforcement	"Non-woven" Spunbond polyester fabric	"Non-woven" Spunbond polyester fabric
Thickness	4,2 mm	4,2 mm
Dimensional stability at 100°C (EN 1110)	Stable	Stable
Flexibility in cold conditions (EN 1109) (1)	-25°C	-25°C
Tensile strength under max. load Long./Trans. (EN 12311-1) (2)	900/700 N/5 cm	900/700 N/5 cm
Elongation ultimate Long./Trasv. (EN 12311-1) (2)	50/50%	50/50%
Tensile strength of the joints (EN 12317-1)	≤ 500 N/5 cm or breakage outside the joint	≤ 500 N/5 cm or breakage outside the joint
Resistance to tearing Long./Trasv. (EN 12310-1)	200/200N	200/200N
Puncture resistance (UNI 8202)	Static/Dynamic	Static/Dynamic
• on cement	PS <sup>4</sup> /PD <sup>4</sup>	PS <sup>4</sup> /PD <sup>4</sup>
• on polystyrene	PS <sup>4</sup> /PD <sup>4</sup>	PS <sup>4</sup> /PD <sup>4</sup>
Dimensional stability in hot conditions Long/Trans (EN 1107-1)	-0.50/+0.30%	
Impermeability to water (EN 1928)	Absolute	Absolute
Resistance to thermal ageing 6 months at 70°C (flexibility after ageing)	-10°C	-10°C
Resistance to fatigue at -20°C (UEAtc)		
• new material (1000 cycles)	No breakage	No breakage
• old material (500 cycles)	No breakage	No breakage
(1) Measurement carried out on the underside without Flamina. (2) Nominal value tolerance conform to UEAtc directive for polymer-bitumen membrane, January 1984. Conform to prEN 13707 standards (August 1999) § 5.3.2. as vapour barrier resistance factor $\mu$ for reinforced polymer-bitumen membranes can be taken as > 20,000.		

HELASTA/P4			MINERAL HELASTA/P4		
Thickness	Roll size m	No. of rolls per pallet	Thickness	Roll size m	No. of rolls per pallet
4 mm	1 x 10	24	4 mm	1 x 10	24

### IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** endeavours to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot - because **a.b.e.®** has no direct or continuous control over where and how **a.b.e.®** products are applied - accept any liability either directly or indirectly arising from the use of **a.b.e.®** products, whether or not in accordance with any advice, specification, recommendation or information given by the company.

### FURTHER INFORMATION

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. **a.b.e.® Construction Chemicals** has a wealth of technical and practical experience built up over years in the company's pursuit of excellence in building and construction technology.



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