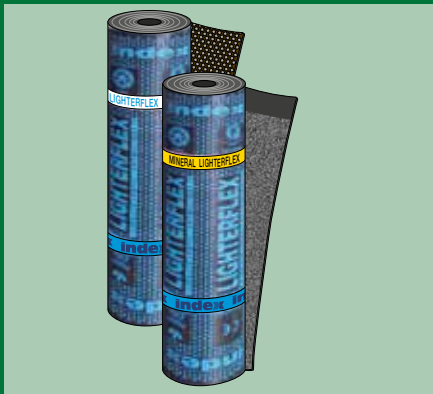


# LIGHTERFLEX HPCP

REINFORCED ELASTOPLASTOMERIC WATERPROOFING MEMBRANES  
WITH HIGH CONCENTRATION OF DISTILLED BITUMEN





# LIGHTERFLEX HPCP POLYESTER MINERAL LIGHTERFLEX HPCP POLYESTER

REINFORCED ELASTOPLASTOMERIC WATERPROOFING MEMBRANES  
WITH HIGH CONCENTRATION OF BITUMEN AND POLYMERS

CONFERISCE CREDITI **LEED**

CATEGORY		CHARACTERISTICS			ENVIRONMENTAL						METHOD OF USE		
ELASTOPLASTOMERIC	WATERPROOF	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

**LIGHTERFLEX HPCP** is the range of INDEX membranes developed based on the technology used up-to-date for some membranes sold abroad, where a minimum amount of bonding was requested, which has now been further implemented and applied to a specific line of membranes.

The **LIGHTERFLEX HPCP** membranes are produced in a range of "cold" flexibility such to satisfy the various technical/economic requirements of the national market.

The membranes of the **LIGHTERFLEX HPCP** series consist of a polymer-bitumen mix in which, by means of the mixers and the high shear homogenizers installed on the production lines, the pool of usual polymers has been partially replaced by a blend of elastomers, plastomers and metallocene copolymers of higher molecular weight than that used for the corresponding standard membrane with the same "cold" flexibility. The alloy "with phase inversion" thus obtained presents a continuous polymeric phase featuring a higher concentration of copolymers with elastomeric reaction. This enables the production of membranes with higher bonding but with performance comparable to standard membranes, which consequently produces two advantages.

The first advantage lies in the production of membranes featuring high thermoplastic bonding that makes it easier for the mix to melt, which translates into faster laying and lower consumptions of gas compared to the equivalent standard membranes.

The second advantage depends on the increase in low density components which, with the same thickness, implies a consequent reduction in the mass per unit area of the product. The **LIGHTERFLEX HPCP** membranes are lighter than the equivalent range of standard products and still maintain their watertightness over time. The reduction in the weight of the rolls may even be as much as 40% approximately.

More rolls can therefore be transported at a time, respecting the load-bearing capacity of the vehicles and the lifting equipment, plus they are easier for operators to handle.

**LIGHTERFLEX HPCP 5 POLYESTER** membranes are reinforced with a composite non-woven rot-proof polyester fabric stabilised with fibreglass. It offers high mechanical and elastic resistance and has an excellent dimensional stability when hot, which reduces problems of

fabric warping and shrinkage of the end joints, because it is 2 to 3 times more stable than normal non-woven polyester fabric reinforcements. **LIGHTERFLEX HPCP 20 POLYESTER, 15 POLYESTER and 10 POLYESTER** reinforced with Spunbond non-woven fabric stabilised in the same way with fibreglass are further characterised by superior mechanical resistance.

**LIGHTERFLEX HPCP 5V** is reinforced longitudinally with fibreglass mat, is rot-proof and offers high dimensional stability.

The top face of the **LIGHTERFLEX HPCP** membranes is covered with fine screen-printed talcum, which is uniformly distributed. This is a patented treatment that makes the rolls easy to unwind and makes the sealing of the overlap joints quicker and more secure.

The top face of the **MINERAL LIGHTERFLEX HPCP** version is self-protected with slate granules, glued and pressed hot, with the exception of a side overlap strip without slate and protected with a strip of Flamina film that is flame-melted to seal the overlap joint.

The bottom face of both types is covered with Flamina, a plastic hot-melt film and is embossed to obtain both the pretension (consequently the excellent heat-shrinkage of the film) and to ensure a larger flame surface (consequently more secure and quicker laying).

## APPLICATION FIELDS

The durable mechanical and elastic resistance and stability at both high and low temperatures of the **LIGHTERFLEX HPCP** and **MINERAL LIGHTERFLEX HPCP** membranes means that they can be used as a sealing element for new builds and renovations:

- On all sloping surfaces: flat, upright and curved.
- On different types of laying surfaces: cement-based laying surfaces cast on site or prefabricated; on metal or wood roofing and on the most widely used thermal insulation systems in the building trade.
- For the most extensive range of uses: flat and pitched roofs, under-tile, dielectric coverings and foundation walls

The high dimensional stability of **LIGHTERFLEX HPCP 5V** makes it suitable to be used as a layer underneath other membranes reinforced with non-woven polyester fabric to build-up double layer waterproof coverings.

**LIGHTERFLEX HPCP 5V** can be used in single layers as a vapour barrier.



**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**

- LIGHTERFLEX HPCP 20 POLYESTER
- LIGHTERFLEX HPCP 15 POLYESTER
- LIGHTERFLEX HPCP 10 POLYESTER
- LIGHTERFLEX HPCP 5 POLYESTER
- LIGHTERFLEX HPCP 5V

• **Upper layer in multi-layer systems without permanent heavy surface protection**

- LIGHTERFLEX HPCP 20 POLYESTER
- MINERAL LIGHTERFLEX HPCP 20 POL.
- LIGHTERFLEX HPCP 15 POLYESTER
- MINERAL LIGHTERFLEX HPCP 15 POL.
- LIGHTERFLEX HPCP 10 POLYESTER
- MINERAL LIGHTERFLEX HPCP 10 POL.
- LIGHTERFLEX HPCP 5 POLYESTER
- MINERAL LIGHTERFLEX HPCP 5 POL.

• **Under heavy protection in multi-layer systems**

- LIGHTERFLEX HPCP 20 POLYESTER
- LIGHTERFLEX HPCP 15 POLYESTER
- LIGHTERFLEX HPCP 10 POLYESTER
- LIGHTERFLEX HPCP 5 POLYESTER

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

• **Membranes for foundations**

- LIGHTERFLEX HPCP 20 POLYESTER
- LIGHTERFLEX HPCP 15 POLYESTER
- LIGHTERFLEX HPCP 10 POLYESTER
- LIGHTERFLEX HPCP 5 POLYESTER

### EN 13970 - BITUMEN WATER VAPOUR CONTROL LAYERS

- LIGHTERFLEX HPCP 5V

### EN 13859-1 - UNDERLAY FOR DISCONTINUOUS ROOFING

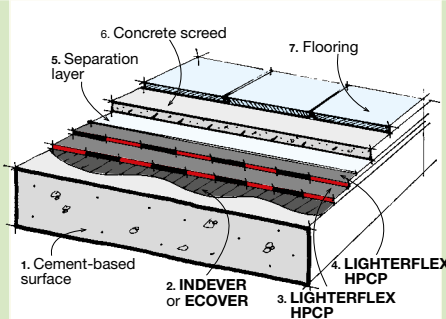
- MINERAL LIGHTERFLEX HPCP 20 POL.
- MINERAL LIGHTERFLEX HPCP 15 POL.
- MINERAL LIGHTERFLEX HPCP 10 POL.
- MINERAL LIGHTERFLEX HPCP 5 POL.



# APPLICATION FIELDS

## FLAT ROOF THAT CAN BE WALKED OVER WITH FLOOR LAID ON SITE

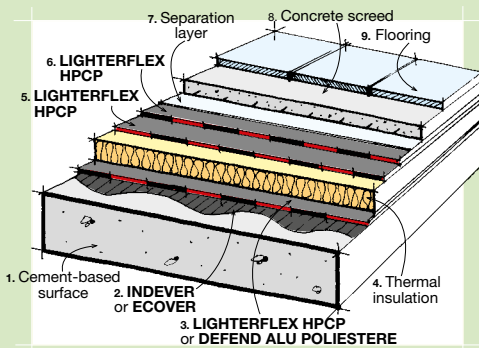
### • without thermal insulation



#### STRATIGRAPHY

1. Cement-based surface
2. INDEVER or ECOVER
3. LIGHTERFLEX HPCP
4. LIGHTERFLEX HPCP
5. Separation layer
6. Concrete screed
7. Flooring

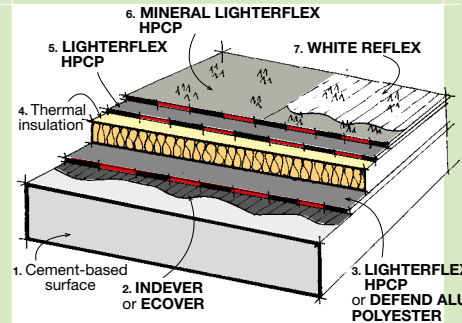
### • with thermal insulation



#### STRATIGRAPHY

1. Cement-based surface
2. INDEVER or ECOVER
3. LIGHTERFLEX HPCP or DEFEND ALU POLIESTERE
4. Thermal insulation
5. LIGHTERFLEX HPCP
6. LIGHTERFLEX HPCP
7. Separation layer
8. Concrete screed
9. Flooring

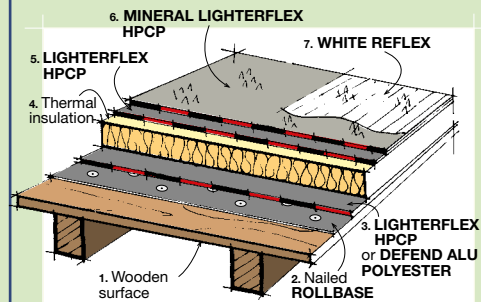
## FLAT ROOF THAT CANNOT BE WALKED OVER ON CONCRETE



#### STRATIGRAPHY

1. Cement-based surface
2. INDEVER or ECOVER
3. LIGHTERFLEX HPCP or DEFEND ALU POLYESTER
4. Thermal insulation
5. LIGHTERFLEX HPCP
6. MINERAL LIGHTERFLEX HPCP
7. WHITE REFLEX

## FLAT ROOF THAT CANNOT BE WALKED OVER ON WOOD

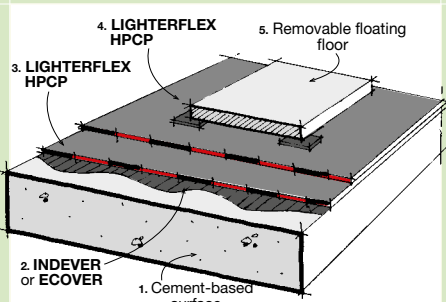


#### STRATIGRAPHY

1. Wooden surface
2. Nailed ROLLBASE
3. LIGHTERFLEX HPCP or DEFEND ALU POLYESTER
4. Thermal insulation
5. LIGHTERFLEX HPCP
6. MINERAL LIGHTERFLEX HPCP
7. WHITE REFLEX

## FLAT ROOF THAT CAN BE WALKED OVER WITH FLOATING FLOOR

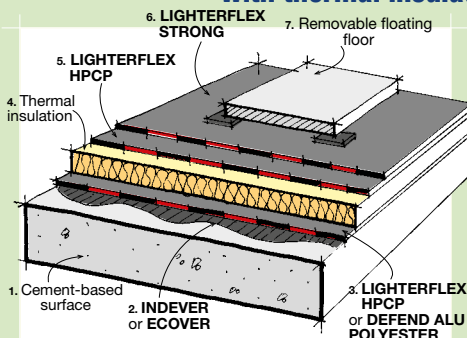
### • without thermal insulation



#### STRATIGRAPHY

1. Cement-based surface
2. INDEVER or ECOVER
3. LIGHTERFLEX HPCP
4. LIGHTERFLEX HPCP
5. Removable floating floor

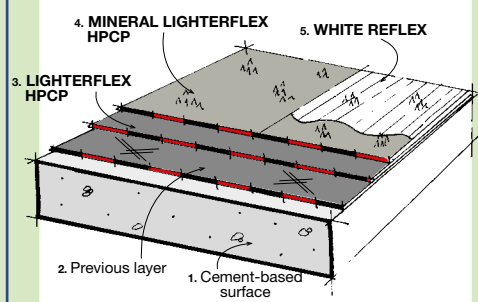
### • with thermal insulation



#### STRATIGRAPHY

1. Cement-based surface
2. INDEVER or ECOVER
3. LIGHTERFLEX HPCP or DEFEND ALU POLYESTER
4. Thermal insulation
5. LIGHTERFLEX HPCP
6. LIGHTERFLEX STRONG
7. Removable floating floor

## FLAT ROOF THAT CANNOT BE WALKED OVER REFRUBISHMENT



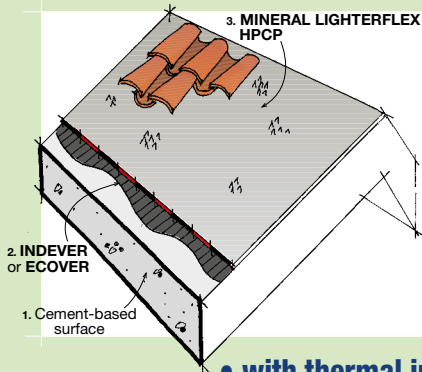
#### STRATIGRAPHY

1. Cement-based surface
2. Previous layer
3. LIGHTERFLEX HPCP
4. MINERAL LIGHTERFLEX HPCP
5. WHITE REFLEX

# APPLICATION FIELDS

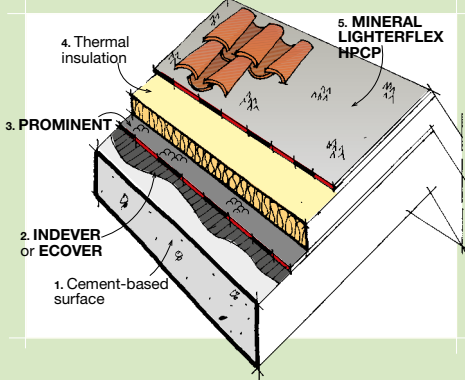
## UNDER-TILE ON CONCRETE

### • without thermal insulation



**STRATIGRAPHY**  
 1. Cement-based surface  
 2. INDEVER or ECOVER  
 3. MINERAL LIGHTERFLEX HPCP

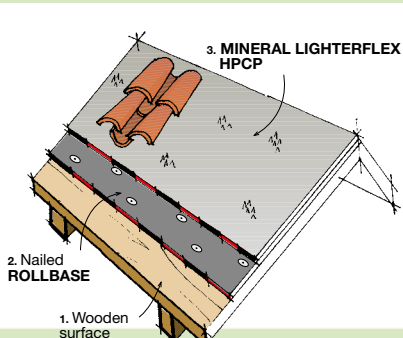
### • with thermal insulation



**STRATIGRAPHY**  
 1. Cement-based surface  
 2. INDEVER or ECOVER  
 3. PROMINENT  
 4. Thermal insulation  
 5. MINERAL LIGHTERFLEX HPCP

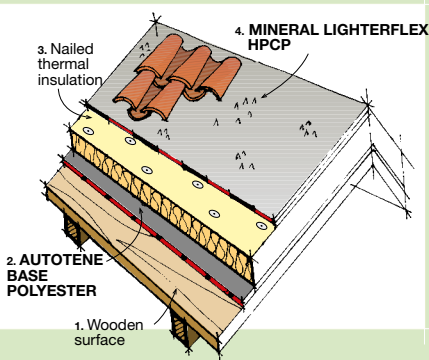
## UNDER-TILE ON WOOD

### • without thermal insulation



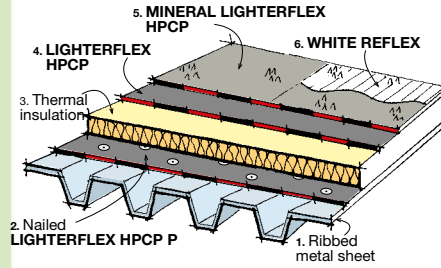
**STRATIGRAPHY**  
 1. Wooden surface  
 2. Nailed ROLLBASE  
 3. MINERAL LIGHTERFLEX HPCP

### • con isolante termico



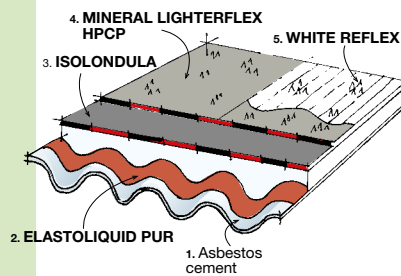
**STRATIGRAPHY**  
 1. Wooden surface  
 2. AUTOTENE BASE POLYESTER  
 3. Nailed thermal insulation  
 4. MINERAL LIGHTERFLEX HPCP

## RIBBED METAL SHEET



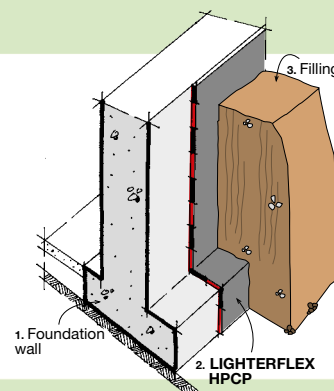
**STRATIGRAPHY**  
 1. Ribbed metal sheet  
 2. Nailed LIGHTERFLEX HPCP P  
 3. Thermal insulation  
 4. LIGHTERFLEX HPCP  
 5. MINERAL LIGHTERFLEX HPCP  
 6. WHITE REFLEX

## REFURBISHMENT OF ASBESTOS CEMENT ROOFING



**STRATIGRAPHY**  
 1. Asbestos cement  
 2. ELASTOLIQUID PUR  
 3. ISOLONDULA  
 4. MINERAL LIGHTERFLEX HPCP  
 5. WHITE REFLEX

## FOUNDATIONS



**STRATIGRAPHY**  
 1. Foundation wall  
 2. LIGHTERFLEX HPCP  
 3. Filling

## TECHNICAL CHARACTERISTICS

	Standard	T	LIGHTERFLEX HPCP 20 POL. - 15 POL. - 10 POL.			MINERAL LIGHTERFLEX HPCP 20 POL. - 15 POL. - 10 POL.			LIGHTERFLEX HPCP 5 POLYESTER		MINERAL LIGHTERFLEX HPCP 5 POLYESTER		LIGHTERFLEX HPCP 5V
			Non-woven composite stabilized Spunbond polyester			Non-woven composite stabilized Spunbond polyester			Non-woven composite stabilized polyester		Non-woven composite stabilized polyester		Fibreglass mat
Reinforcement			3 mm   4 mm			4.5 mm (*)			3 mm   4 mm		4.5 mm (*)		3 mm
Thickness	EN 1849-1	±0,2	3 mm   4 mm			4.5 mm (*)			3 mm   4 mm		4.5 mm (*)		3 mm
Mass per unit area MINERAL	EN 1849-1	±10%	2.7 kg/m <sup>2</sup>	3.6 kg/m <sup>2</sup>		4.5 kg/m <sup>2</sup>			2.5 kg/m <sup>2</sup>	3.4 kg/m <sup>2</sup>		4.5 kg/m <sup>2</sup>	2.5 kg/m <sup>2</sup>
Roll size	EN 1848-1	≥	1×10 m	1×10 m		1×10 m			1×10 m	1×10 m		1×10 m	1×10 m
Watertightness	EN 1928 - B	≥	60 kPa			60 kPa			60 kPa		60 kPa		60 kPa
Shear resistance L/T	EN 12317-1	-20%	600/400 N/50 mm			600/400 N/50 mm			300/200 N/50 mm		300/200 N/50 mm		-
Maximum tensile force L/T	EN 12311-1	-20%	700/500 N/50 mm			700/500 N/50 mm			450/300 N/50 mm		450/300 N/50 mm		300/200 N/50 mm
Elongation L/T	EN 12311-1	-15% V.A.	40/45%			40/45%			40/40%		40/40%		-
Resistance to impact	EN 12691 - A		1 250 mm			1 250 mm			700 mm		700 mm		-
Resistance to static loading	EN 12730 - A		15 kg			15 kg			10 kg		10 kg		-
Resistance to tearing (nail shank) L/T	EN 12310-1	-30%	170/170 N			170/170 N			120/120 N		120/120 N		70/70 N
Dimensional stability L/T	EN 1107-1	≤	-0.30/+0.10%			-0.30/+0.10%			-0.25/+0.10%		-0.25/+0.10%		-
Flexibility to low temperature	EN 1109	≤	20P -20°C	15P -15°C	10P -10°C	20P -20°C	15P -15°C	10P -10°C	-5°C		-5°C		-5°C
Flow resist. at high temp. • after ageing	EN 1110 EN 1296-1110	≥ -10°C	120°C 110°C			120°C 110°C			100°C 90°C		100°C 90°C		100°C -
Water vapour transmission • after ageing	EN 1931 EN 1296-1931	-20% -20%	-			-			-		-		μ = 100 000 -
UV ageing	EN 1297		Test passed			-			Test passed		Test passed		-
Reaction to fire Euroclass	EN 13501-1		E			E			E		E		E
External fire performance	EN 13501-5		F roof			F roof			F roof		F roof		F roof

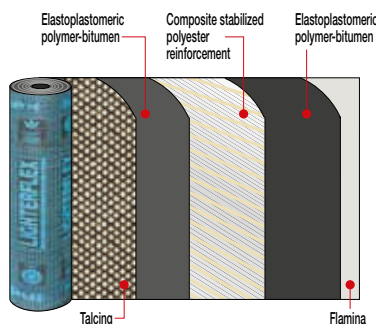
Thermal specifications

			0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK
Thermal conductivity			0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK	0.2 W/mK
Heat capacity			3.51 KJ/K	4.68 KJ/K	5.40 KJ/K	3.25 KJ/K	4.42 KJ/K	5.40 KJ/K	3.25 KJ/K

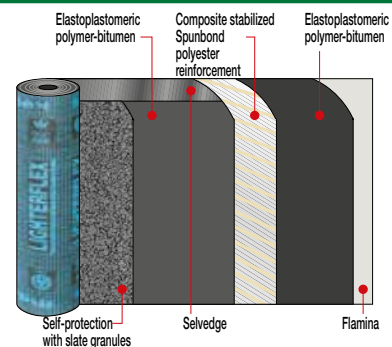
Compliant with EN 13707 in terms of the resistance factor to steam penetration for reinforced polymer-bitumen membranes, the value of μ = 20.000 may be considered, unless declared otherwise.  
(\*) Thickness measured on the width of the membrane compliant with EN 1849-1, tolerance ±10%

## COMPOSITION OF THE MEMBRANE

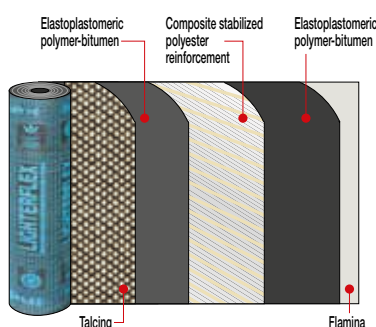
### LIGHTERFLEX HPCP 20 POLYESTER - 15 POLYESTER - 10 POLYESTER



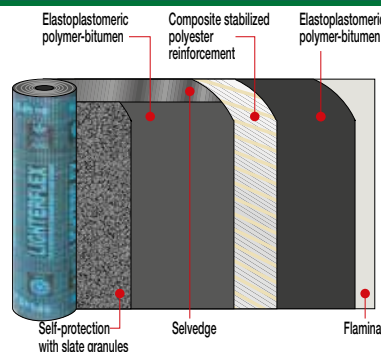
### MINERAL LIGHTERFLEX HPCP 20 POLYESTER - 15 POLYESTER - 10 POLYESTER



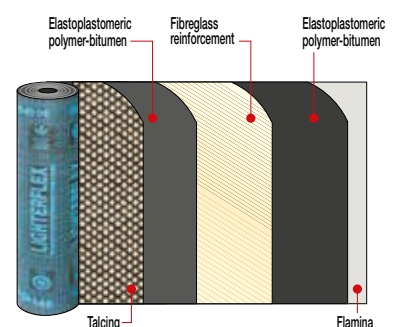
### LIGHTERFLEX HPCP 5 POLYESTER



### MINERAL LIGHTERFLEX HPCP 5 POLYESTER



### LIGHTERFLEX HPCP 5V



# REFERENCES

References of work fulfilled in North Europe with light reinforced elastoplastomeric waterproofing membranes with high concentration of bitumen and polymers, type LIGHTERFLEX HPCP, still efficient.

Year: 1985



Year: 1986



Year: 1987



Year: 1992



## The INDEX Environmental policy

INDEX produces a wide range of products and systems for the waterproofing and containment of energy in buildings over time, for the safety and comfort of the living environment.

A long time ago Index launched an intensive research and development campaign into new materials and systems that could reduce the environmental impact of its products, both during laying and while in use.

The commitment that Index makes to the environment can also be seen through its environmental management system for reducing the impact of its production processes on the health of workers and the community.

Along with the development of products that do not emit pollutants, priority has always been given to the use of recycled materials in the production cycle whilst keeping the performance and durability of the products unaltered.

Attention to satisfying the customer's requirements and protecting the health of workers has led to the development of new innovative materials that don't just respect the environment but also reduce problems for users and contribute to cutting the risk of accidents on the worksite.

### INDEX and sustainable building

What does "sustainable development" in the building fields mean?

Green Building, sustainable building, bio-building, bio-architecture and eco-compatible design are synonyms that indicate the design, construction and management of buildings with an awareness that a decision made here and now will have a consequence everywhere in the future. Therefore, it aims to reduce the impact of building on the environment and is the meaning of sustainable development in the building industry.

GBC Italia, which Index belongs to, has the task of using the common guidelines to everyone in the international community, LEED, to develop the characteristics of the LEED Italia system, which must take into consideration the specific climatic, building and legislative conditions in Italy.

LEED (Leadership in Energy and Environmental Design) opts for a view of sustainability by making the most of all possibilities to reduce the various kinds of environmental impacts and harmful emissions of the buildings being built. The LEED standards are parameters for sustainable building, developed in the USA and applied in 40 countries throughout the world.

In order to make a correct design choice with sensitivity to the environmental issue, INDEX produces materials and suggests systems for sustainable building in compliance with the Green Building Council criteria, aimed at:

- reducing the environmental impact of building materials both while they are being laid and while they are in use
- reducing indoor pollution
- reusing materials recovered from pre- and post-consumption of building products
- containing energy in the building
- reducing "urban heat islands"
- reducing greenhouse gas emission
- making progress in living comfort, eliminating the problems of humidity, heat insulation and sound insulation in the building.

• 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 •

**index**  
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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.

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