



Panel XPS

PANEL XPS is an insulating system in panels, put together and heat joined to a bituminous waterproof membrane. On demand is available a special selvedge for sealing the overlaps, 8 cm wide on polyester versions and 5 cm on fiberglass versions, composed of a strip self-adhesive protected by siliconized polyethylene.

The sealing of the side overlaps always occurs by self-adhesion while the head overlaps or however on the slate, they must be sealed with the help of bituminous mastic PRATIKO MASTIC or, when it is possible, they can be welded with hot air.

This special selvedge allows a fast and safe application (without using flame).

PANEL XPS is recommended for the insulation and waterproofing of covers in general, with the great convenience of using a single product; in fact, they offer the high thermal insulation capacity of extruded polystyrene and the waterproofness of a bituminous membrane.

PANEL XPS are made of extruded polystyrene (XPS), closed cell, self-extinguishing RF class E, in compliance with the requirements of European Directive 89/106/ECC and are produced considering and applying the EN 13164 product standards with the CE marking.

Fields of use

PANEL XPS fit any type of cover: flat, sloped and curved. They are quick to apply and once installed, thanks to the overlapping flange, the cover is already waterproofed. After installing PANEL XPS, a second waterproofing membrane or the definitive roof covering can be applied.

Installation

PANEL XPS should be anchored according to the nature and slope of the application surface and local weather conditions (windy, cold weather etc.) using adequate mechanical fasteners, with suitable bonding systems or with appropriate bossed membranes.

PANEL XPS offers high resistance to mechanical stress together with high thermal and acoustic insulation; the system's bituminous component is exclusively to protect the insulating element.

Laying of the next gripping layer must be carried out in total adhesion and on top of the underlying membrane.

MEMBRANE TECHNICAL CHARACTERISTICS	M.U.	REFERENCE NORM	P	P	PA	PA	PA	V	V	TOLERANCE
REINFORCEMENT TYPE			Single strand polyester					Fibreglass		
UPPER FACE FINISH			PE film		Mineral*			PE film		
LOWER FACE FINISH			PE film							
THICKNESS	mm	EN 1849-1	3	4				2	3	±5%
MASS	kg/m ²	EN 1849-1			3,5	4,0	4,5			±10%
COLD FLEXIBILITY	°C	EN 1109				-10				
FLOW RESISTANCE	°C	EN 1110			120					
FLOW RESISTANCE AFTER AGEING	°C	EN 1296		110		110				-10°C
SHEAR RESISTANCE L / T	N / 5 cm	EN 12317-1	300/200							±20%
TENSILE STRENGTH L / T	N / 5 cm	EN 12311-1			400/300			300/200		±20%
ELONGATION AT BREAK L / T	%	EN 12311-1			35/35			2/2		±15 / ±2
TEAR RESISTANCE L / T	N	EN 12310-1			130/130			70/70		±30%
DIMENSIONAL STABILITY	%	EN 1107-1			-0,3			NPD		
LOSS OF MINERAL SLATE	%	EN 12039			30					
STATIC PUNCTURE RESISTANCE	kg	EN 12730	10							
DYNAMIC PUNCTURE RESISTANCE	mm	EN 12691	700							
FIRE RESISTANCE		EN 13501-5			F ROOF					
REACTION TO FIRE		EN 13501-1			F					
TENSILE STRENGTH AFTER AGEING L / T	N / 5 cm	EN 1296			NPD					±20%
IMPERMEABILITY AFTER ARTIFICIAL AGEING	kPa	EN 1296			60					
WATERTIGHTNESS	kPa	EN 1928			60					

* Mineral self-protected products may undergo color tone variations due to the time and length of storage. Exposure to atmospheric conditions, after application, will tend to uniform the color after a few months. The change in color tone cannot therefore be contested and / or complained of as it is a natural phenomenon that the slate manufacturer himself cannot guarantee.

NPD = No Performance Declared in accordance with the EU Construction Products Directive.

XPS technical specifications

(In compliance with current EN 13164 standards)

**THERMAL INSULATING PANELS
COUPLED WITH BITUMINOUS
MEMBRANES**

CHARACTERISTICS	M.U.	XPS
PANEL SIZE	m	1 x MULTIPLE 0,60
AVAILABLE THICKNESSES	mm	30
	mm	40
	mm	50
	mm	60
	mm	80
	mm	100
	mm	120
	mm	140



CHARACTERISTICS	SYMBOL M.U.									NORM
		30	40	50	60	80	100	120	140	
Declared thermal conductivity	λ_D (10°C W/mk)	0,034			0,035			0,038	0,039	UNI EN 13164
Declared heat resistance $R_D = d/\lambda_D$	R_D (m²K/W)	0,88	1,17	1,42	1,71	2,25	2,85	3,16	3,59	UNI EN 13164
Dimensional stability at 70°C with 90% RH	DS (TH) (%)	≤ 5								EN 1604
Deformation under load 40 kPa 70°C	DLT (2) (%)	≤ 5								EN 1605
Operating limit temperature	°C	+75								UNI EN 14706
Compressive strength at 10% deformation	σ_{10} (kPa)	≥ 200		≥ 250		≥ 300			UNI EN 826	
Tensile strength	σ_{mt} (kPa)	> 400								EN 1607
Water absorption in the long term by total immersion (28 days)	WL (T) (%)	≤ 1								UNI EN 12087
Water vapour transmission by diffusion	μ	80	70	65	55	70			UNI EN 12086	
Reaction to fire	Euroclass	E								UNI EN 11925-2 UNI EN 13501-1
Coefficient of linear thermal expansion	mm/mK	0,07								UNI EN ISO 1923
Specific heat	C_p (J/kgK)	1450								UNI EN ISO 10456
Closed cells	CV %	> 95								UNI EN ISO 4590
Water absorption in the long term by diffusion (28 days)	Vol. %	≤ 5				≤ 3				EN 12088

DIMENSIONAL TOLERANCE

THICKNESS	mm	< 50 from 50 to 140	-2; +2 -2; +3	UNI EN 823	T1
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The data reported in this table refer to a bare, uncoupled panel.

We reserves the rights to change or modify the nominal values without prior notice or advice. The information contained in this data sheet are based on our experience. We cannot take any responsibility for a possible incorrect use of the products. The customer has to choose under their own responsibility a product fit for the intended use.

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