

PANEL PUR

PUR Insulation panels with waterproofing membrane



Description

PANEL PUR is a thermal insulation system in panels, the waterproofing bitumen membrane is applied by heat to the panel.

The PANEL PUR is indicated for both insulation and waterproofing of roof covers, with the advantage of using one product; in fact it unifies the high capacity of polyurethane thermal insulation with the waterproofing of bituminous membranes.

PANEL PUR is made from closed cell rigid polyiso foam, protected with covering of multi-layer gas A-Cell®.

Areas of application

The PANEL PUR is adaptable to any roof: flat, sloped or curved.

They are fast to apply and once down, the roof is waterproof, thanks to the provided side seldge. Once the application of PANEL PUR has been terminated, a second layer of waterproofing membrane can be applied.

Application

PANEL PUR is fixed to the deck depending on the application slope and local climatic conditions (ventilated areas, harsh climate, etc..) with suitable mechanical fixings, glues or dimpled faced membranes.

PANEL PUR has an excellent resistance to mechanical fatigue together with a good acoustic insulation; the bituminous component of the system has an exclusive function of protection of the insulating element.

The application of the second layer, must be fully bonded astride and over the lower membrane.

Technical data bituminous waterproofing membrane

Technical characteristics	M.U.	Reference Norm	P	P	PA	PA	PA	V	V	Tol.	
Reinforcement type			Single strand polyester					Fiber glass			
Upper face finish			PE film		Mineral slate *			PE film			
Lower face finish			PE film								
Thickness	mm	EN 1849-1	3	4				2	3	±5%	
Weight	kg/m ²	EN 1849-1			3,5	4,0	4,5			±10%	
Cold flexibility	°C	EN 1109	NPD								
Heat stability	°C	EN 1110	120								
Heat stability after ageing	°C	EN 1296		110			110			-10°C	
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					
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%	
Elongation at break after ageing L / T	%	EN 1296			NPD					-15	
Impermeability after artificial ageing	kPa	EN 1296			60						
Impermeability to water	kPa	EN 1928			60						

* It is impossible to guarantee the color uniformity on self protected mineral membranes as the suppliers of the same do not provide any also. All self protected mineral finished membranes undergo color variations over time due to the exposure to atmospheric agents. Normally these variations in time will gradually become uniform.

Technical data PANEL PUR

Characteristics	M.U.	CODE	PUR
Panel dimension	m		1 x multiples 0,60
Available thickness	mm		30
	mm		40
	mm		50
	mm		60
	mm		70
	mm		80
	mm		90
	mm		100
	mm		110
	mm		120

Characteristics	M.U. symbol	Value		Norm
Panel mass including covering	MVA (kg/m ³)	38.5 ±2		UNI EN 1602
Declared thermal conductivity	λ_0 (10°C W/mk)	0.023		UNI EN 13165 (Appendix A-C)
Initial thermal conductivity average	$\lambda_{mean,i}$ (10°C W/mk)	0.022		EN 12667
Declared thermal resistance	R_0 (m ² K)/W	d=30 mm d=40 mm d=50 mm d=60 mm d=70 mm d=80 mm d=90 mm d=100 mm d=110 mm d=120 mm	1.30 1.70 2.15 2.60 3.00 3.45 3.90 4.30 4.75 5.20	UNI EN 13165
Dimensional stability (+70±2)°C e (90±5)% U.R. for (48±1) h - side variations - thickness variations	DS (TH) (%)	≤1.0 ≤4.0		EN1604
Dimensional stability (+20±3)°C for (48±1) h - side variations - thickness variations	DS (TH) (%)	≤0.5 ≤4.0		EN1604
Compression resistance at 10% of deformation	(kPa)	30, 40 mm 50, 60, 70 mm 80, 90, 100 mm 110, 120 mm	≥130 ≥150 ≥175 ≥140	UNI EN 826
Water absorption totally submersed for a period of time (28 days)	WL (T) (%)	≤1.5		UNI EN 12087 method 2A
Water vapor diffusion resistance	Z (m ² h Pa/mg)	31 ±14		UNI EN 12086
Factor of water vapor diffusion resistance	μ	80 mm	272	UNI EN 12086
Reaction to fire	Euroclass	F		UNI EN 11925-2 UNI EN 13501-1
Specific warmth	C_p (J/kgK)	1470		

The data provided in the present table refers to the naked panel without anything bonded to it. The information provided in the data sheet are to our current best knowledge. Pluvitec reserves the right to modify the nominal values without notice. The purchaser must establish under his own responsibility the suitability of the product for the foreseen usage.