

## Mineral finished composite waterproofing membrane

### Compound

Prefabricated modified composite polymer-bitumen waterproofing membrane composed of distilled bitumen and differentiated waterproofing masses, specifically designed for use over old bituminous waterproofing membranes.

The upper face compound is composed of distilled bitumen and elastoplastomers while the lower face compound is composed of distilled bitumen and special polymers which provide particular characteristics of adhesion & workability.

A special waterproofing mass is used to bond the upper & lower compounds.

### Reinforcements

PLURA R is reinforced with a woven non woven single strand composite polyester fabric, with very good mechanical characteristics and exceptional dimensional stability.

### Finishes

The P version has a woven non woven polypropylene mat with very good resistance to foot traffic and dynamic & static puncture resistance.

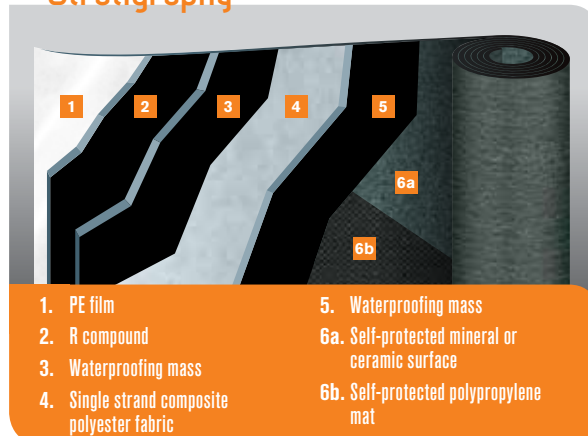
The PA version is self-protected with mineral or ceramic slates which reduce heat absorption and improve the durability of the membrane.

PLURA R PA has a 10 cm side selvedge and a 15 cm head selvedge which promotes the adhesion between the various sheets.

#### Advantages in terms of sustainability

- Product ECO 100: product with regenerated raw materials and totally recyclable

### Stratigraphy



1. PE film
2. R compound
3. Waterproofing mass
4. Single strand composite polyester fabric
5. Waterproofing mass
- 6a. Self-protected mineral or ceramic surface
- 6b. Self-protected polypropylene mat

### Advantages of PLURA R

- Faster application, due to the special formulation of the lower face compound (savings of approx. 50% of gas).
- More safety at the jobsite, as it is not necessary to use hot oxidized bitumen to amalgamate the mineral of the old membrane.
- Obtains a secure and efficient proven water tightness due to the exceptional adhesion of the compound which, amalgamating the mineral slates in the melted mass of the lower face of the PLURA R, creates a full bond to the old membrane.



EN 13707

EN 13859-1

EN 13969

### Fields of use



**PLURA R P 4 MM + POLYPROPYLENE MAT**  
**PLURA R PA 5,0 KG/M<sup>2</sup>**

#### EN13707 Continuous roofs (Certificate n° GB14/92056)

N° layers			Method of application					Type of applications			Type					
Single layer	Double layer	Multilayer	Torch	Hot air	Mixed (Torch / Air)	Cold bond glue	Mechanical fixing	Thermoadhesive / Self-adhesive	Fully bonded	Partially bonded	Loose laid	Complimentary layer	Top layer	Heavy protection	Anti-root	Other uses
	■	■	■						■				■			
	■	■	■						■				■			

#### EN13859-1 Under roof tile

**PLURA R PA 5,0 KG/M<sup>2</sup>**

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#### EN13969 Retaining walls (Certificate n° GB14/92056)

**PLURA R P 4 MM + POLYPROPYLENE MAT**

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## Areas of use

PLURA R is specifically indicated for use as a re-furbishment layer over existing old bituminous waterproofing membranes, especially those with mineral slate finish considering the excellent characteristics of adhesion and workability. PLURA R is compatible and can be applied with all PLUVITEC membranes, both APP & SBS.

## Sizes & packing

Description	P 4 mm	PA 5,0 kg/m <sup>2</sup>
<b>Rolls size [m]</b>	10 x 1	8 x 1
<b>Rolls per pallet</b>	20	23
<b>Square meters per pallet [m<sup>2</sup>]</b>	200	184

Sizes & packing may vary depending on the type of transportation.

The technical data given is based on average values obtained during production.

Pluvitec reserves the rights to change or modify the nominal values without prior notice or advice.

## Technical data

Technical Characteristics	Measure units	Reference norm			Tolerances
<b>Type of reinforcement</b>			Single strand polyester		
<b>Upper face finish</b>			Polypropylene mat	Mineral or ceramic surface *	
<b>Lower face finish</b>			PE film		
<b>Length</b>	m	EN 1848-1	10 -1%	8 -1%	≥
<b>Width</b>	m	EN 1848-1	1 -1%		≥
<b>Thickness</b>	mm	EN 1849-1	4		±5%
<b>Mass</b>	kg/m <sup>2</sup>	EN 1849-1		5,0	±10%
<b>Artificial U.V. ageing</b>		EN 1297	Pass		
<b>Loss mineral</b>	%	EN 12039		30	≤
<b>Cold flexibility</b>	°C	EN 1109	-10		≤
<b>Flow resistance</b>	°C	EN 1110	130		≥
<b>Flow resistance after ageing</b>	°C	EN 1296 EN 1110	120		-10°C
<b>Shear resistance L / T</b>	N/5 cm	EN 12317-1	500/400		-20%
<b>Tensile strength L / T</b>	N/5 cm	EN 12311-1	600/500		-20%
<b>Elongation at break L / T</b>	%	EN 12311-1	35/35		-2
<b>Tearing resistance L / T</b>	N	EN 12310-1	150/150		-30%
<b>Static puncture resistance</b>	kg	EN 12730	15		≥
<b>Dynamic puncture resistance</b>	mm	EN 12691-B	900		≥
<b>Dimensional stability</b>	%	EN 1107-1	-0,3		≤
<b>Fire resistance</b>		EN 13501-5	F R00F		
<b>Fire reaction</b>		EN 13501-1	F		
<b>Watertightness</b>	kPa	EN 1928-B	60		≥
<b>Watertightness after ageing</b>	kPa	EN 1296 EN 1928-B	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.

## Other performance data

Technical Characteristics	Measure units	
<b>Specific heat</b>		1.70 KJ/kg°K
<b>Thermal conductivity</b>	λ	0.170 W/m°K

## Application and Recommendations

- Clean the application surface.
- Apply by torch application or hot air, in correspondence to the verticals, a 25 cm strip of polyester reinforced membrane.
- Position the sheets always starting from the lowest point, in order to have all the overlaps with the slope.
- When applying staggered, position the sheets alternating the overlapped areas, in order to not create joints against the slope towards the drains.
- After having positioned the sheets, re-roll the membranes to half their length, beginning the application by torching; repeat the same operation with the other half of the roll (drawing 1).
- It is necessary to heat the entire surface, besides the overlaps, of the lower face to obtain a full adhesion to the application surface.
- During the application by torch a mass of melted compound must form in front of the roll in order to saturate the surface porosity. The mass of melted compound is created by torching the R compound on the lower face of the membrane (drawing 2).
- Torch by flame or hot air the side laps (10 cm) and the head laps (15 cm) with an overlap torch. During this operation use a metal roller (15 kg) to press the overlaps and obtain a bead of melted compound. It is not necessary to iron the overlaps during this operation (drawing 3).
- Apply the vertical membrane sheet by overlapping on to the horizontal surface by at least 10 cm, torching by flame or hot air, pressing the joints with a trowel to obtain a bead of melted compound to finish the corners (drawing 4).
- The height of the vertical must be at least 15 cm more than the finished roof surface.
- Verticals higher than 20 cm must be done with SUPERTEC PA 4 mm.



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