

PLURA® R FIRE RESISTANT

Composite APP bituminous waterproofing membrane

Compound

Prefabricated modified composite waterproof membrane with differentiated waterproofing compounds. The upper face waterproofing compound is composed of distilled bitumen and elasto plastic polyolefin's with high heat resistance and cold flexibility, while the lower face compound is composed of distilled bitumen and special polymers which give incomparable characteristics of adhesion to all types of substrates and in a particular way to old membranes with mineral self-protection. A particular compound, specifically studied, is used to make the upper and lower face compounds compatible. The waterproofing compound has a special inorganic and non toxic additive which confer to the product a flame retardant action.

Reinforcements

The particular reinforcement used in the PLURA R provides the membrane with incomparable dimensional stability and exceptional mechanical characteristics.

Finishes

The PLURA R membrane can be finished on the upper face with natural mineral slate, besides extending the life expectancy of the membrane, reduces heat buildup on the surface. Alternatively it can be finished on the upper face with a special white ceramic slate with good reflective capacities, besides extending the life expectancy of the membrane, it reduces heat buildup both on the external surface as well as inside the building with a reasonable savings in terms of energy consumption. The emissivity of the PLURA R furthermore favors the dissipation of accumulated heat during the night. The lower face or application surface has a PE film finish. PLURA R is provided with a side selvedge of 10 cm and a head selvedge of 15 cm, which favors the joining and water resistance of the sheets.

Advantages in terms of sustainability

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

Stratigraphy



- | | |
|----------------------------|---------------------------------|
| 1. PE film | 5. Waterproofing mass |
| 2. R compound | 6a. Natural mineral slate |
| 3. Waterproofing mass | 6b. Special white ceramic slate |
| 4. Composite reinforcement | |

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.
- The special white ceramic slate finish, with good reflective capacities, extends the life of the membrane and furthermore reduces the temperature of the external surface as well as inside of the building with reasonable savings in terms of energy consumption.

To improve the reflectivity and capability of lowering the temperature, apply the VOLTAIKA coating on the mineral surface.



EN 13707

Fields of use

EN13707 Continuous roofs (Certificate n° 0958-CPR-2045/1)



PLURA R 4 MM ON SELVEDGE F.R.

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

Areas of use

PLURA R is used to refurbish old membranes, especially those self-protected with mineral slates, given the excellent characteristics of adhesion and workability.

The particular formulation of the PLURA R membrane makes it compatible with all PLUVITEC membranes, be they either APP or SBS based.

Sizes & packing

Description	4 mm on selvedge
Rolls size [m]	8 x 1
Rolls per pallet	23
Square meters per pallet [m²]	184

Sizes & packing may vary depending on the type of transportation. The technical data given is based on average values obtained during production. We reserve 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.

Technical data

Technical Characteristics	Measure units	Reference norm		Tolerances
Type of reinforcement			Stabilized composite reinforcement	
Upper face finish			Natural slate / White ceramic slate *	
Lower face finish			PE film	
Length	m	EN 1848-1	8 -1%	≥
Width	m	EN 1848-1	1 -1%	≥
Thickness	mm	EN 1849-1	4 on selvedge	±5%
Artificial U.V. ageing		EN 1297	Pass	
Loss mineral	%	EN 12039	30	≤
Cold flexibility	°C	EN 1109	-20	≤
Cold flexibility after ageing	°C	EN 1296 EN 1109	-15	+15°C
Flow resistance	°C	EN 1110	140	≥
Flow resistance after ageing	°C	EN 1296 EN 1110	140	-10°C
Shear resistance L / T	N/5 cm	EN 12317-1	1100/1100	-20%
Peel resistance of joints L / T	N/5 cm	EN 12316-1	50/50	-20N
Tensile strength L / T	N/5 cm	EN 12311-1	1200/1200	-20%
Elongation at break L / T	%	EN 12311-1	20/20	-15
Tearing resistance L / T	N	EN 12310-1	200/200	-30%
Static puncture resistance	kg	EN 12730	15	≥
Dynamic puncture resistance	mm	EN 12691-B	1000	≥
Dimensional stability	%	EN 1107-1	-0.2	≤
Fire resistance		ENV 1187 EN 13501-5	B _{ROOF} (t2)	
Fire reaction		EN 11925-2 EN 13501-1	E	
Watertightness	kPa	EN 1928-B	60	≥
Watertightness after ageing	kPa	EN 1296 EN 1928-B	60	≥
Vapour transmission	μ	EN 1931	20000	≥
S.R.I. Solar Reflectance Index **	%	ASTM E-1980	Pass	

* 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.

** with white ceramic slate.

Other performance data

Technical Characteristics	Measure units	
Specific heat		1.70 KJ/kg°K
Thermal conductivity	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 PRATIKO P+V 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 PRATIKO P+V 4 mm or PRATIKO G200 MINERAL.
- The rolls are to be stored in an upright position, preferably indoors in a dry and ventilated area, away from heat sources and avoiding to stack them one on top of the other to avoid possible deformations which may compromise the application.
- Do not keep the product outside and at a temperature below +10°C and above +40°C except for the time strictly required for application.
- The application must be done at temperature higher than + 5°C.
- The application must be interrupted in adverse weather conditions (high humidity, rain, etc.).
- The pallets on which the rolls are packaged are intended for normal warehouse use.
- The materials on stock should be rotated following a first in first out rotation.

