

Pratiko® MINERAL FIRE RESISTANT

APP distilled bituminous waterproofing membrane

Compound

Prefabricated modified polymer bitumen membrane composed of polyolefin thermoplastic stereospecific polymers with high molecular weight and special distilled bitumens, with excellent characteristics of resistance to ageing and phase inversion.

These built in elements, integrating themselves, enhance the excellent qualities of flexibility, lightness, adhesion, resistance to ageing and to UV rays of the PRATIKO MINERAL F.R. membrane.

The waterproofing compound has a special inorganic and non toxic additive which confer to the product a flame retardant action.

Reinforcement

The particular stabilized composite reinforcement used in PRATIKO MINERAL F.R. confer to the product exceptional mechanical characteristics and excellent dimensional stability.

Finishes

The PRATIKO MINERAL F.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.

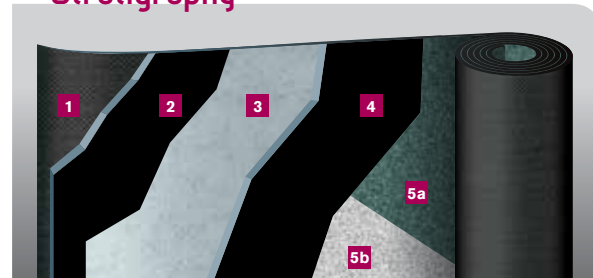
Alternatively it can be finished with a special white ceramic slate with good reflective capacities, besides extending the life expectancy of the membrane, its reduces heat buildup both on the external surface as well as inside the building with a reasonable savings in terms of energy consumption.

The emissivity of the PRATIKO MINERAL F.R. furthermore favors the dissipation of accumulated heat during the night.

On the application face, the membrane is finished with a woven non woven polypropylene mat, suitable for both application with adhesive cold bond glues, as well as on PLURA THERMO AD.

PRATIKO MINERAL F.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.

Stratigraphy



1. Polypropylene mat
2. Waterproofing mass
3. Stabilized composite reinforcement
4. Waterproofing mass
- 5a. Natural mineral slate finish
- 5b. White ceramic slate finish

Advantages in terms of sustainability

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

Advantages of PRATIKO MINERAL FR

- Useable, depending on the type of construction and project, both as a single or multi-layer and especially in those applications where absolute dimensional stability is required

Advantages of the system

- System which can be applied with adhesive cold bond glues, as well as on PLURA THERMO AD
- System with continuous roof sectors
- System with low environmental impact
- System resistant to aging



EN 13707

EN 13859-1

Fields of use



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

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

PRATIKO MINERAL F.R. 4 MM ON SELVEDGE

EN13859-1 Under roof tile

PRATIKO MINERAL F.R. 4 MM ON SELVEDGE

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Areas of use

Due to its characteristics, the membrane of the PRATIKO MINERAL F.R. series can be used with success in a wide range of waterproofing applications in civil and industrial works, for example flat, sloped & barrel roofs, etc.

The particular formulation of the membranes of the PRATIKO MINERAL F.R. series makes them compatible with all PLUVITEC membranes, be they either APP or SBS based.

PRATIKO MINERAL F.R. can be used, based on the type of construction and project, either single layer or in multi-layer systems and especially in those applications where an exceptionally high dimensional stability is required. In the applications with cold bond adhesives PRATIKO MINERAL F.R. is used as a single layer, prior to having applied suitable bituminous adhesive glue (PRATIKO ADHESIVE).

The application over heat sensitive substrates (ex. polystyrene insulation) can only be done prior to having applied a layer of PLURA THERMO AD V or P 2,5 mm membrane. The adhesion to the first layer must be total.

For further information and news it is recommended to consult the PLUVITEC technical literature; our Technical office is always available to evaluate particular problems and to provide the necessary assistance to best apply our waterproofing membranes.

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 mineral slate / White ceramic slate *	
Lower face finish			PPL mat	
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
Tearing 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		EN 13501-5	B _{ROOF} (t2)	
Fire reaction		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°C
Thermal conductivity	λ	0.170 W/m°C

Pratiko®
MINERAL F.R.

Applications & Recommendations

With PLURA THERMO AD (see drawing A)

- On cementitious substrates or similar apply by roller or airless the bituminous primer PRIMERTEC AD, approx. consumption 300 g/m².
- Apply by torch application in correspondence to the verticals, a strip of APP 4 mm membrane 25 cm wide.
- PRATIKO MINERAL F.R. must always be applied in the same direction and staggered for half of its width for about ¼ in the direction of the length, with the same procedure to that of the layer of PLURA THERMO AD.
- In order to have all the overlaps with the slope, position and apply the PRATIKO MINERAL F.R. membrane starting from the lowest point.
- Position the sheets alternating the overlapped areas, in order to not create joints against the slope towards the drains.
- Cut at 45° the angles of the membrane which will overlap with next sheet (10 x 10 cm).
- Weld to the PLURA THERMO AD membrane the PRATIKO MINERAL F.R. by means of a gas torch.



With cold bond glue PRATIKO ADHESIVE (drawing B)

- On cementitious substrates or similar apply by roller or airless the bituminous primer PRIMERTEC AD, approx. consumption 300 g/m².
- Apply by torch application in correspondence to the verticals, a strip of APP 4 mm membrane 25 cm wide.
- 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.
- Cut at 45° the angles of the membrane which will overlap with next sheet (10 x 10 cm).
- Fold or re-roll the membrane halfway, leaving the substrate exposed on which the cold bond glue will be applied.
- Pour the bituminous cold bond glue PRATIKO ADESHIVE based on the absorption of the substrate (from 0.8 to 1.5 kg/m²). To avoid spillage along the pails, scrape the edge with the squeegee.
- Pour and uniformly spread in a homogeneous fashion the cold adhesive glue with a metal/rubber squeegee. Cover with the membrane the cold adhesive glue and fold back the other half.
- Carry out the same procedure as described above with the remaining area.

Common process between the systems

Overlaps

- Weld the side (10 cm) and head laps (15 cm) by torching with suitable overlap torch or hot air gun. During this operation, apply pressure to the overlap with a metal roller (15 kg); a bead of bitumen compound must come out from the overlap. For this it is not necessary to iron the overlaps (drawing C).
- Apply the vertical membrane by overlapping it to the flat surface by at least 10 cm, torching it with a suitable safety burner or hot air gun, squeezing the overlaps with a heated trowel, this in order to have a bead of bitumen to round off the edges (drawing D).

Recommendations

- The height of the verticals must be equal or superior to 15 cm of the superior finished layer of the roof.
- The rolls are to be stored vertically in suitable facilities (covered and ventilated), away from heat sources and avoiding to stack them one on top of each other, to avoid deformations which can compromise the correct application. It is suggested to stock the products at temperatures superior to 0°C.
- The application surface must be smooth, dry and clean.
- The application surface must be priority treated with suitable bituminous primer (PRIMERTEC AD or ECOPRIMER), to eliminate dust and promote adhesion of the membrane.
- **The application surface must not have any depressions to avoid the risk of ponding water, the slope must be at least 1.5% on concrete decks and 3% for steel or wooden ones, this to guarantee a proper run off of rainwater.**
- The application must be done at temperatures superior to + 5 °C.
- The application must be interrupted in poor atmospheric conditions (high humidity, rain, etc.).
- The pallets are intended for normal warehouse use and not to be lifted to roof tops.

