

# PLURA<sup>®</sup> MINERAL

il THERMOADESIVO

Thermal activated composite waterproofing membrane

## Compound

Prefabricated thermal activated composite waterproofing membrane, composed of distilled bitumen and special synthesis polymers, which provide thermal adhesion properties to the lower face waterproofing compound.

The waterproofing compound of the upper face allows for fast heat transmission to the lower face.

The thermal activated waterproofing compound allows the product to be positioned and applied without the initial use of heat and is particularly indicated for those surfaces where the use of direct open flame is not suggested.

PLURA THERMO AD MINERAL was developed for sloped roofs and for use under roof tiles directly on the substrate or heat sensitive insulation.

## Reinforcement

PLURA THERMO AD MINERAL has a rot proof composite woven non woven single strand polyester, with high mechanical characteristics.

## Finishes

The upper face is self protected with mineral slates which reduce superficial heat absorption, improving the durability of the membrane. A side & head selvedge of respectively 10 & 15 cm are provided to improve adhesion and water tightness between the sheets.

The lower face is provided with a thermoplastic removable film.

### Advantages in terms of sustainability

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

## Fields of use



PLURA THERMO AD PA 4 KG/M<sup>2</sup>

## Stratigraphy



1. Release film
2. Thermal activated mass
3. Woven non woven single strand composite polyester reinforcement
4. Mass which promotes fast heat transmission
5. Self-protected mineral surface
6. Release film side selvedge

## Advantages of PLURA THERMO AD MINERAL

- Eliminates risk of fire during application.
- Possible to use on heat sensitive insulation panels (ex. PSE).
- Possible to use on wooden planks.
- Possible to use with any type of bituminous membrane or polyolefin.
- The special compounds of PLURA THERMO AD MINERAL behave in a permanent elastic manner, uniformly distributing and accommodating those micro movements of the substrate.
- Less noise during application.
- Reduction of application time equal to approx. 50%.
- The PLURA THERMO AD MINERAL membrane achieves total adhesion between the substrate and waterproofing element, guaranteeing the traceability of any accidental infiltration and assuring an exceptional wind resistance (uplift). See BDA report.
- Progressive increase of the adhesion, due to the particular compound of PLURA THERMO AD MINERAL preserves and maintains in time its characteristics of thermal adhesion. Once the maximum adhesion value has been reached (superior to the intrinsic cohesion of the insulating element) there is no decline with time of the adhesive strength.



EN 13859-1

### EN13859-1 Under roof tile

N° layers		Method of application				Type of application			Type						
Single layer	Double layer	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

### Advantages of the system

- Monolithic system
- System with continuous roof sectors
- System guaranteed from the action of wind uplift
- Secure system against the risk of fire
- System with low environmental impact
- System resistant to ageing

### Sizes & packing

Description	PA 4 kg/m <sup>2</sup>
Rolls size [m]	10 x 1
Rolls per pallet	27
Square meters per pallet [m <sup>2</sup> ]	270

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	PA	Tolerances
Type of reinforcement			Single strand polyester	
Upper face finish			Mineral *	
Lower face finish			Silicon release film	
Length	m	EN 1848-1	10 -1%	≥
Width	m	EN 1848-1	1 -1%	≥
Mass	kg/m <sup>2</sup>	EN 1849-1	4	±10%
Loss mineral	%	EN 12039	30	≤
Cold flexibility	°C	EN 1109	NPD	≤
Cold flexibility after aging	°C	EN 1296 EN 1109	NPD	≤
Tensile strength L / T	N/5 cm	EN 12311-1	400/300	-20%
Tensile strength after ageing L / T	N/5 cm	EN 1296 EN 1297 EN 12311-1	400/300	-20%
Elongation at break L / T	%	EN 12311-1	35/35	-15
Elongation at break after ageing L / T	%	EN 1296 EN 1297 EN 12311-1	35/35	-15
Tearing resistance L / T	N	EN 12310-1	120/120	-30%
Dimensional stability	%	EN 1107-1	-0,3	≤
Fire resistance		EN 13501-5	F ROOF	
Fire reaction		EN 13501-1	F	
Watertightness	kPa	EN 1928-B	60	≥
Watertightness after artificial ageing	kPa	EN 1296 EN 1297 EN 1928-B	60	≥
Vapour transmission	μ	EN 1931	20000	≥

\* 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.

### Other performance data

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

### Areas of use

PLURA THERMO AD MINERAL can be used with success as a waterproofing element for under roof tile applications in a wide range of both civil and industrial works.

Particularly suitable for all those structures and applications where the use of direct flame on the substrate is not recommended (ex. polystyrene insulation or wooden roofs).

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

The adhesion of PLURA THERMO AD MINERAL will be obtained by exposure to the sun, making sure to always mechanically fix the sheets in correspondence of the side & head laps. Furthermore particular care must be given during application around the details (perimeter, protruding objects, etc.), of the parapets and in correspondence of change of slope; during the winter season use an appropriate hot air gun.

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.

## Applications & Recommendations

- On cementitious substrates or similar apply by roller or airless the bituminous primer PRIMERTEC AD, approx. consumption 300 g/m<sup>2</sup>. This is not necessary on wooden surfaces that have not been treated with oily substances.
- Position the PLURA THERMO AD MINERAL rolls on the application surface without the use of heat. (Drawing 1)
- Remove part of the thermoplastic film and fix the head laps by using a hot air gun (always mechanically fix the sheets in correspondence of the side & head laps). (Drawing 2/3)
- Provide for side & head laps respectively of 10 & 15 cm between the sheets, making sure to also remove the side overlap on the upper face.
- Remove the thermoplastic film on the lower face of the membrane. (Drawing 4/5)
- After having positioned the rolls, apply pressure over the surface using a suitable roller to promote adhesion.
- The adhesion of the PLURA THERMO AD MINERAL will occur with the heat of the sun. During the winter season it is suggested, once the sheets have been laid, to do the details (chimneys, perimeters, protruding objects, skylights, etc.) activating the thermo adhesive compound with appropriate hot air gun.

**NOTE: If applied following the above recommendations, the resistance of the system (PLURA THERMO AD – PRATIKO P+V) to wind uplift will not be inferior to 10,0 kPa (1000 kg/m<sup>2</sup>). (Official test report “Report BDA 0025-L-07”)**

To best use the technical characteristics of bituminous membranes and guarantee the maximum performance and durability of the jobs where they are used, some simple but fundamental rules must be respected.

- The rolls are to be stored in an upright position, indoors in a dry and ventilated area, away from heat sources. Absolutely avoid the stacking of rolls and pallets for storage or transport to avoid possible deformations which may compromise a perfect installation. It is recommended to store the product at temperatures above 0°C.
- The rolls shall be kept in a warm or heated storage area during application, should the workability of the material deteriorate or become stiff and difficult to install during application, these should be returned to the heated storage area and substituted with new rolls. The rolls that are temporarily stored on the roof before application, shall be kept elevated by being left on their own pallets and shall be covered and protected from the weather.
- The application surface must be smooth dry & clean.
- **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.**
- In situations of application on vertical surfaces superior to 2 meters or on very sloped substrates, apply suitable mechanical fixings to the head and side laps, after which they will be sealed.
- 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.

