

PRO-TEC VAPOUR BARRIER

Modified APP waterproofing membrane for use as a vapour barrier

Description

Pre-fabricated waterproofing membrane for specific use as a total barrier to the passage of vapour.

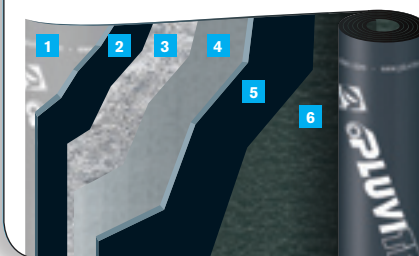
The waterproofing mass is made of distilled bitumen and elastoplastic polymers (APP), reinforced with a rot proof fibre glass reinforcement and aluminium film which allows to obtain a barrier to the transmission of vapour.

Due to the characteristics, the membranes of the PRO-TEC VAPOUR BARRIER range are used with success in the waterproofing of both civil and industrial works where required, with the use of thermal insulation, as an absolute barrier to the transmission of water vapour.

In the stratification of the roof, the pro-tec vapour barrier must be positioned under the insulation, in order to preserve it from phenomena's of water vapour condensation, which surely occurs, with the excursion changes of the thermal conditions of the roof.

Stratigraphy

1. P.E. film
2. Waterproofing mass
3. Film of aluminium
4. Fibre glass reinforcement
5. Waterproofing mass
6. P.E. film



Methods of application

For the application of the membrane the use of heat is generally used by means of a gas torch or specific hot air machine.

The application by heat is not suggested when on heat sensitive materials (polystyrene insulation).

- Coordinate the operations in a way to not cause damage to the construction elements and underground structure. Avoid to leave the structure for the night or for periods of prolonged work interruptions without having been properly sealed.
- The application surface must not have depressions, to avoid the ponding of rain water and must have a sufficient slope to guarantee a slope run off of rain. Normally this is obtained with a slope of 1.5%.
- The water drainage spouts should be sufficiently big enough to allow for rain water to be eliminated in an efficient way.
- Prepare cementitious substrates, including verticals and details, with a bituminous primer either by brush or airless, approx. 300/400 gr/m².
- Allow this preparation layer to dry before proceeding with any other operation.
- With prefabricated constructions, apply a suitable reinforcing strip along all joints. In the presence of construction joints, prefabricated panels or metal decks, suitable expansion joints are to be considered.

The membranes must be applied to the substrate fully bonded. In any case, when in the proximity of the head laps, the membrane must be applied for at least 100 cm; furthermore all details, perimeters,

verticals, change of slope as well as projecting area must be fully bonded.

Application of the insulation


When choosing the method of fixing the insulation of the roof system, applied on top of the pro-tec vapour barrier, the following factors must be considered:

- type of insulation (Characteristics of stability, compression, etc..)
- compatibility between the fixing, the insulation and the waterproofing membrane.
- the factor of possible wind uplift
- the type of substrate

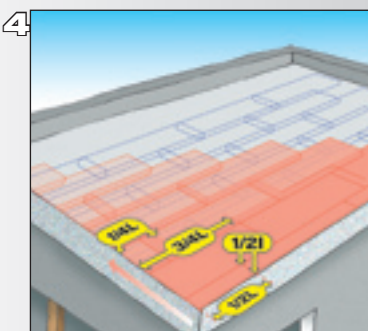
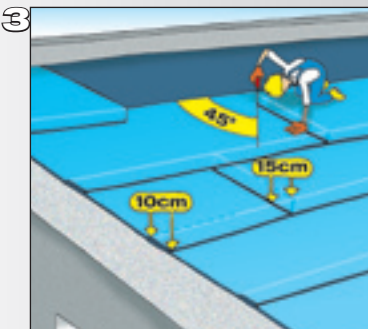
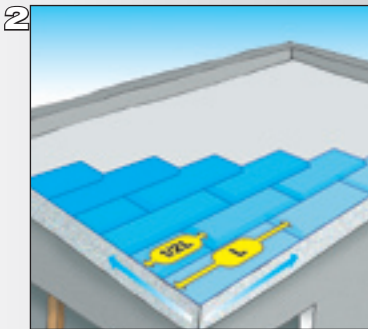
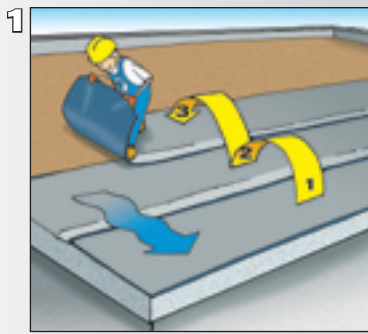
Where application with mechanical fixing is required of the panels, these must be applied side by side making sure that they are also staggered and properly fixed to the pro-tec vapour barrier with suitable fixings to the type of substrate and of the correct length based on the thickness, these should be at least 10 cm from the edges and along the diagonals. The total resistance of the fixing elements of the panel, to wind uplift (Wh), should in any case be superior to ≥ 400 N per fixing. For the application of the insulation it is suggested to follow the indications of the manufacturer and eventual indications in the specification.

For further information and indications it is recommended to consult PLUVITEC's technical literature.

Fields of use

 Certificate N. 0958-CPD-DK029 Certificate N. 0958-CPD-DK030 INTRON CERTIFICATE Certification body 0958	CE Certification		N° layers	Method of application					Type of app.			Type							
	EN13707 Continuous Roofs	EN13859-1 Under Roof Tile		EN13870 Vapour Barrier	EN13869 Retaining Walls	Other Uses	Torch	Hot Air	Mixed (Torch/Air)	Cold Bond Glue	Mechanical Fixing	Thermo Ad / Self Adhesive	Fully Bonded	Partially Bonded	Loose Laid	Complimentary Layer	Top Layer	Heavy Protection	Anti-root
PRO-TEC VAPOUR BARRIER 3.0 KG/M ²	•	•				•					•				•				
PRO-TEC VAPOUR BARRIER 3 MM						•					•				•				

How to apply



PRO-TEC VAPOUR BARRIER

Application

- On cementitious surfaces and similar apply, by roller or airless, bituminous primer, approx. consumption 300 gr/m².
- Apply by torch application a 25 cm strip of membrane reinforced with polyester along all vertical up stands.
- To have all overlaps with the slope, position the membrane always starting from the lowest point. (Draw. N.1)
- Position the membrane sheets staggered, avoiding to create any overlaps against the slope and the drains. (Draw. N.2)
- Cut the corners of membrane sheet which will be laid under the next sheet at a 45° angle (10 x 10 cm). (Draw. N.3)
- The joints, both side and head, must be respectively overlapped by 10 & 15 cm. (Draw. N.3)
- The second layer of membrane will be applied astride and over the first one, always in the same direction, and approx. 1/4 of its length from the previous sheet. (Draw. N.4)
- The bituminous membrane will be applied with a propane gas torch to the substrate. It is necessary to heat the entire surface, except for the side & head laps, making sure that the compound forms a liquid mass in front of the roll to assure that it saturates any superficial porosity.
- The side laps (10 cm) and head laps (15 cm) will be heat welded with an appropriate torch; during this stage the overlaps should be pressed by using a roller (15 kg) from which a bead of compound should flow and therefore avoiding to have to iron the overlaps.
- Apply the vertical membrane sheet making sure that it overlaps the horizontal one by at least 10 cm, heating it with a gas torch and squeezing it with a trowel until a bead of compound appears from underneath.
- The height of the verticals must be equivalent or superior to the finished surface by at least 15 cm.

Recommendations

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, 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. When storing with original packaging, these should not be stacked more than two plits high using appropriate wooden spacers.

- 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 be previously treated with a suitable bituminous primer (PRIMERTEC or IDROPRIMER), to eliminate dust and enhance the adhesion of the membrane.
- The application surface must not have any depressions, to avoid water ponding, and must have a slope which is sufficient enough to guarantee the run off of rain water (min. 1.5 %).
- In situations of application on vertical surfaces superior to 2 meters or on very sloped substrates, apply suitable mechanical fixings to the head laps, after which they will be sealed when torching the head laps.
- 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 materials without mineral self-protection or P+V, used as a top layer (cap sheet), can be painted with an aluminium coating to improve and extend the performance and life expectancy, the material should be allowed to oxidize approx. 3-6 months before being coated. An alternative, depending on the type of construction, it is possible to use heavy protection (floating pavements, stone, 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.

Technical data

Technical Characteristics	Measure Units	Reference Norm	V.B.	Tolerance
Type of reinforcement			Fibre glass+aluminium	
Upper face finish			P.E. film	
Lower face finish			P.E. film	
Length	m	EN 1848-1	10 -1%	
Width	m	EN 1848-1	1 -1%	
Thickness	mm	EN 1849-1	3	-5%
Mass	kg/m ²	EN 1849-1	3	-10%
Cold flexibility	°C	EN 1109	-10	
Shear resistance L / T	N / 5 cm	EN 12317-1	NPD	-20%
Tensile strength L / T	N / 5 cm	EN 12311-1	350/250	-20%
Elongation at break L / T	%	EN 12311-1	2/2	-2
Tearing resistance L / T	N	EN 12310-1	100/100	-30%
Dynamic puncture resistance	mm	EN 12691	500	
Water vapour permeability	μ	EN 1931	1500000	
Fire resistance		EN 13501-5	F ROOF	
Fire reaction		EN 13501-1	F	
Water vapour permeability after artificial ageing	μ	EN 1296	NPD	
Watertightness	Kpa	EN 1928	60	

Sizes & packing

Description	V.B. 3 kg/m ²	V.B. 3 mm
PRO-TEC VAPOUR BARRIER		
Rolls size [m]	10x1	10x1
Rolls per pallet	36	30
Square meters per pallet [m ²]	360	300

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.