Technical data sheet

MAXITEC VAPOUR BARRIER

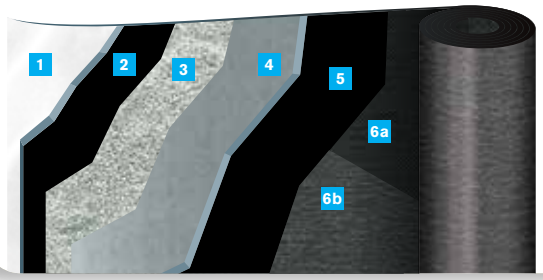
Modified APP waterproofing membrane for use as a vapour barrier

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 elasto-plastic 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 MAXITEC 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 MAXITEC 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. PE film
2. Waterproofing mass
3. Aluminium film
4. Fibre glass reinforcement
5. Waterproofing mass
6a. Polypropylene mat finish
6b. PE film finish



Application of the insulation

When choosing the method of fixing the insulation of the roof system, applied on top of the MAXITEC 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 MAXITEC 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 PLUVTEC's technical literature.

PLUVIBAND

Heat activated stripes on the lower face of the membrane

PLUVIBAND is made with heat activated stripes and is designed to allow a tenacious partial adhesion of the membrane. The PLUVIBAND finish provides a bonding surface of 50%, greatly improving the adhesion assured by perforated sheets (less than 25%), but leaving unaltered the function of disposing of water vapour present in the old bituminous membrane surface, eliminating the inconvenience of bubbles. The heat activated stripes of the PLUVIBAND finish guarantee a perfect network where water vapour can be distributed and disposed of, something difficult to achieve by spot bonding. The application of bituminous membranes with the PLUVIBAND finish allows also a substantial energy saving of approximately 50% of the normal amount of gas used during installation by fully torching.
Where is it advantageous to use the PLUVIBAND finish:

- in the vapour barrier version the PLUVIBAND finish allows for water vapour, which is formed during applications on still moist or wet screeds, to not form bubbles or blisters;
- in the first layer version (waterproof element) on insulating panels (PIR and PUR). In this case it avoids the formation of bubbles between the insulating panels and bituminous membrane due to the migration of expanding gas which forms from the insulating panels;
- in the re-roof version where we get disposal of water vapour present in the old bituminous membrane.

The PLUVIBAND stripes are on the application face of the membranes, with a special heat activated compound having very high adhesion and tenacity, these are activated during the normal application of the membrane by light torching using a propane gas burner and are protected by a thermo fusible film.

Fields of use

CE

EN13970 *Vapour barrier*

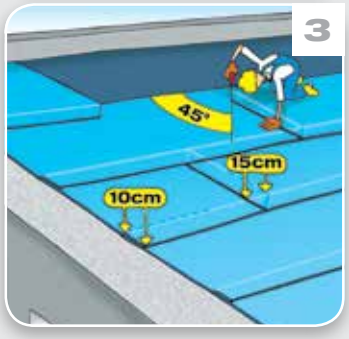
	N° layers			Method of application						Type of application			Type				
	Single Layer	Double Layer	Multilayer	Torch	Hot Air	Mixed (Torch / Air)	Cold Bond Glue	Mechanical Fixing	Thermo Adhesive / Self-Adhesive	Fully Bonded	Partially Bonded	Loose Laid	Complimentary Layer	Top Layer	Heavy Protection	Anti-root	Other Uses
MAXITEC VAPOUR BARRIER V 2.0 KG/M²	▪	▪	▪	▪						▪			▪				
MAXITEC VAPOUR BARRIER V 3.0 KG/M²	▪	▪	▪	▪						▪			▪				
MAXITEC VAPOUR BARRIER V 3 MM	▪	▪	▪	▪						▪			▪				
MAXITEC VAPOUR BARRIER V 4 MM	▪	▪	▪	▪						▪			▪				
MAXITEC VAPOUR BARRIER PLUVIBAND	▪	▪	▪	▪							▪		▪				

The waterproofing membrane based on distilled bitumen and polymers, as shown in this data sheet does not require the issue of a MSDS, because it does not contain dangerous substances. The information data sheet for the proper use of products is available.

MAXITEC VAPOUR BARRIER

technical data sheet

How to apply



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 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 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 g/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.
- All details, perimeters, verticals, change of slope as well as projecting area must be fully bonded.

Application

- On cementitious surfaces and similar apply, by roller or airless, bituminous primer, approx. consumption 300 g/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 nest 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 having the same characteristics of the waterproofing membrane and dimensions equal to the width of the roll, 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 to the thickness of the insulation panel plus 5 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, 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 be previously treated with a suitable bituminous primer, to eliminate dust and enhance the 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.
- 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 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				Tolerance
Type of reinforcement			Fibre glass+aluminium				
Upper face finish			PE film			Polypropylene mat	
Lower face finish			PE film				
Length	m	EN 1848-1	15 -1%	10 -1%			
Width	m	EN 1848-1	1 -1%				
Thickness	mm	EN 1849-1			3	4	±5%
Mass	kg/m²	EN 1849-1	2,0	3,0			±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	450/350				-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				

NPD = No Performance Declared in accordance with the EU Construction Products Directive.

Sizes & packing

	V 2,0 kg/m²	V 3,0 kg/m²	V 3 mm	V 4 mm
Rolls size [m]	15x1	10x1	10x1	10x1
Rolls per pallet	36	36	30	24
Square meters per pallet [m²]	540	360	300	240

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.

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