Technical Data Sheet

PLUVITEC

Modified APP waterproofing membrane

PRO-TEC VIADUCTS

Modified APP waterproofing membrane for civil engineering works

Description

Pre-fabricated waterproofing membrane made of distilled bitumen and elasto-plastic polymers (APP), reinforced with a woven non woven polyester, with very high mechanical characteristics and resistance to both static and dynamic puncture.
The particular structure of these products make them suitable for the waterproofing of complex works where the stress on the waterproofing system require the use of products with proven reliability.

Due to the characteristics, the membranes of the VIADUCT series are used with success for the waterproofing of both civil and industrial works, in particular for those with great mechanical stress such as: bridges, pro-tec viaducts, water works, foundations, parking lots.

Stratigraphy

1. P.E. Film
2. Waterproofing mass
3. Composite polyester reinforcement
4. Waterproofing mass
5. Sand or talc finish

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 regular 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.

Fields of use

CE

■ Certificate N. 0958-CPD-DK029
★ Certificate N. 0958-CPD-DK030

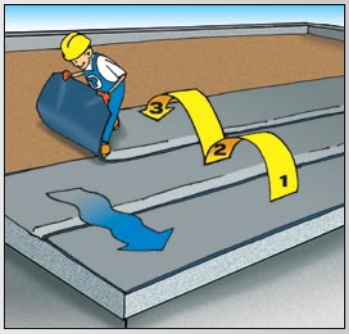
INTRON CERTIFICATIE
Certification body 0958

	CE Certification					N° layers			Method of application						Type of app.			Type				
	EN13707 Continuous Roofs	EN13859-1 Under Roof Tile	EN13970 Vapour Barrier	EN13969 Retaining Walls	Other Uses	Single Layer	Double Layer	Multilayer	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	Other Uses
	■			★																		
PRO-TEC VIADUCTS P 4 MM	•						•	•	•						•			•		•		
PRO-TEC VIADUCTS P 5 MM	•						•	•	•						•			•		•		

PRO-TEC VIADUCTS

technical Data Sheet

How to apply

1


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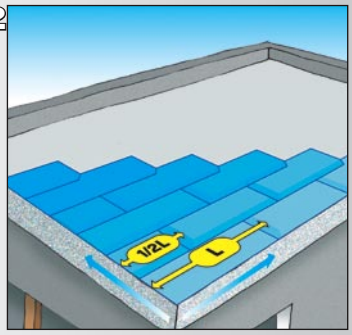

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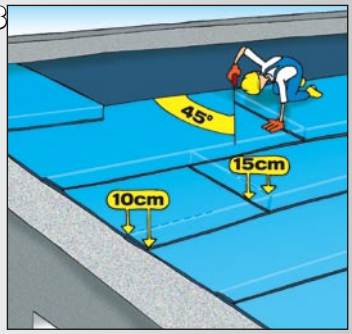

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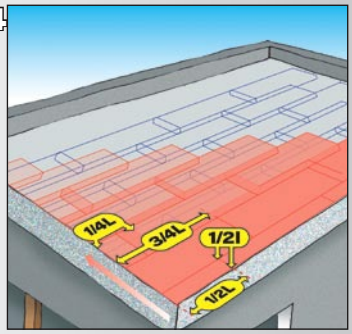

Application

- 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 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 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 plts 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	P	Tolerance
Type of reinforcement			Polyester	
Upper face finish			Sand or talc	
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	4 - 5	-5%
Cold flexibility	°C	EN 1109	-10	
Flow resistance	°C	EN 1110	130	
Tensile strength L / T	N / 5 cm	EN 12311-1	1200/1000	-20%
Elongation at break L / T	%	EN 12311-1	40/40	-15
Static puncture resistance	kg	EN 12730	25	
Dynamic puncture resistance	mm	EN 12691	1750	
Fire resistance		EN 13501-5	F ROOF	
Fire reaction		EN 13501-1	F	
Watertightness	Kpa	EN 1928	60	

Responsible Care
L'impegno dell'industria chimica per l'ambiente, la sicurezza, la salute

ISO 9001 ISO 14001

Sizes & packing

Description PRO-TEC VIADUCTS	P 4 mm	P 5 mm
Rolls size [m]	10x1	10x1
Rolls per pallet	25	20
Square meters per pallet [m²]	250	200

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.

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