Technical data sheet

MAXITEC VIADUCTS ONE

Waterproofing membrane for road surfacing manufactured using PLURA technology

Description

Pre-fabricated waterproofing membrane based on high molecular weight stereospecific thermoplastic polyolefin polymers and special distilled bitumen featuring high ageing resistance characteristics and a high phase inversion point (APP). These complementing constituent elements enhance the exceptional qualities of flexibility, lightness, adhesiveness, resistance to ageing and UV radiation of the MAXITEC VIADUCTS ONE membrane. MAXITEC VIADUCTS ONE is specially designed for use in the construction of bridges, viaducts, parks, roof gardens and for all applications which require high mechanical strength and excellent substrate adhesion. The MAXITEC VIADUCTS ONE application surface is composed of a thermoadhesive waterproof mass with PLURA technology based on special distilled bitumen and synthetic polymers which allow the product to be applied dry. The product is particularly suitable for structures and support layers where the membrane must perfectly adhere to the substrate (total adhesion).

Stratigraphy

1. Silicon release film
2. Waterproofing mass
3. Single strand composite polyester fabric
4. Waterproofing mass
5. Polypropylene mat finish

Reinforcements

Its strength comes from its high weight woven non woven single strand polyester fabric which gives the product excellent mechanical properties, dimensional stability and resistance to static and dynamic puncture.

Finishes

The MAXITEC VIADUCTS ONE membrane is finished on the upper face in woven non woven polypropylene. The lower face of the membrane features a removable film made of thermoplastic material. The application surface presents two non-flammable selvedges that allow the material to be laid in both directions. MAXITEC VIADUCTS ONE is a product specially designed and developed for the application of membranes without the need for heat.

MAXITEC VIADUCTS ONE advantages

- Proven waterproof membrane with high mechanical performance, dimensional stability and very high perforation resistance.
- It is resistant to temperature variations.
- It has sufficient strength to withstand the load imposed upon it during road surface compaction and site traffic movement.
- It is easy to apply, allowing for greater application speed thus reducing to a minimum the time required for the closing of roads and parking lots and dramatically reduces laying errors that would otherwise result in areas that are not perfectly adhered.
- It is compatible with the asphalt laid on viaduct top surfaces.
- It is easily repaired in case of damage as a result of extraordinary viaduct repairs.
- It is resistant to road salts.

Uses

Due to their characteristics MAXITEC VIADUCTS ONE series membranes can be used successfully for waterproofing a wide range of civil and industrial works, in particular in those applications where high resistance to mechanical stress and static and/or dynamic perforation is required, such as: bridges, viaducts, water works, foundations, parking lots, roof gardens, etc. By virtue of their particular formulation MAXITEC VIADUCTS ONE series membranes are compatible with all PLUVITEC membranes, both APP and SBS based. Depending on the type of construction and design MAXITEC VIADUCTS ONE is usable in both monolayer and multilayer situations especially in those applications where high substrate adhesion is called for.

Fields of use

EN13707 *Continuous roofs* (Certificate n° 0958-CPD-DK029)

	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 VIADUCTS ONE P 4 MM		▪	▪	▪						▪			▪		▪		
MAXITEC VIADUCTS ONE P 5 MM		▪	▪	▪						▪			▪		▪		

EN14695 *Viaducts* (Certificate n° 0958-CPD-DK070/1)

MAXITEC VIADUCTS ONE P 4 MM	▪	▪	▪	▪					▪	▪			▪		▪		
MAXITEC VIADUCTS ONE P 5 MM	▪	▪	▪	▪					▪	▪			▪		▪		

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 VIADUCTS ONE

technical data sheet

How to apply

Application

- On cementitious surfaces and similar apply, by roller or airless, bituminous primer PRIMERTEC AD, approx. consumption 300 gr/m². (Draw. N.1)
- Position the rolls of MAXITEC VIADUCTS ONE on the application surface without the use of heat. (Draw. N.2)
- Provide for side & head laps respectively of 10 & 15 cm between the sheets.
- Remove the thermoplastic film on the lower face of the membrane. (Draw. N.3)
- The side laps (10 cm) and head laps (15 cm) will be heat welded with an appropriate torch. (Draw. N.4)
- After having positioned the rolls, apply pressure over the surface using a suitable roller to promote adhesion.
- Apply the vertical membrane sheet, MAXITEC VIADUCTS (standard version), making sure that it overlaps the horizontal one by at least 10 cm, thermal activating by hot air gun.
- The adhesion of the MAXITEC VIADUCTS ONE will occur with the heat of the sun and with the heat of the bituminous asphalt.

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 ECOPRIMER), 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			Single strand 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
Tearing resistance L / T	N	EN 12310-1	200/200	-30%
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	
Dimensional stability	%	EN 1107-1	0,5	
Watertightness	kPa	EN 1928	60	
Bond strenght	N/mm²	EN 13596	0,49	≥
Shear strenght	N/mm²	EN 13653	0,23	≥
Compatibility by heat conditioning	%	EN 14691	177	≥
Crack Bridging Ability	°C	EN 14224	-10	≥
Resistance to dynamic water pressure		EN 14694	pass	
Resistance to compaction of an asphalt layer		EN 14692	pass	
Behaviour of bitumen sheets during application of mastic asphalt	%, mm, %	EN 14693	NPD	

Sizes & packing

	P 4 mm	P 5 mm
Rolls size [m]	10x1	10x1
Rolls per pallet	24	20
Square meters per pallet [m²]	240	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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WATERPROOFING TECHNOLOGIES MADE IN ITALY

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Azienda con sistema certificato

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