

DANOPOL FV 1.5

Danopol FV 1.5 is a synthetic PVC plasticized membrane, reinforced with Fibre glass mat. Designed for flat roof waterproofing, U.V. resistant.



CE MARKING



Identification number of the Certification Body: 0099

DERIVADOS ASFALTICOS NORMALIZADOS S.A.
Calle La Granja 3 (28108 - Alcobendas, MADRID)

Year in which the CE marking was affixed: 2008
Certificate number CPF: 0099 / CPD / A85 / 0013
European standard EN 13956

Produced at: Polígono Industrial Sector 9 (19290 - FONTANAR, Guadalajara)

Membrane of 1.78 m x 15 m x 1.5 mm composed of Fibre glass mat and reinforced with a Fibre glass mat.
Applications: under heavy protection; roof gardens.

Characteristics	Declared Value	Unit	Norm
External fire performance	Broof(t3)-Broof(t1)	-	EN 13501-5
Reaction to fire	E	-	EN 13501-1
[NO ENCONTRADO-// Productos.TRACL1_PVC:TEXTO@2]TRACL1_PVC:TEXTO	> 11	Mpa	-
Longitudinal & transversal tensile strength	> 800	N/50mm	EN 12311-2 Método A
Longitudinal tear strength	> 220	%	EN 12311-2 Método A
Transversal tear strength	> 220	%	EN 12311-2 Método A
Longitudinal resistance to tearing (nail shank)	> 160	N	EN 12310-2
Transversal resistance to tearing (nail shank)	> 160	N	EN 12310-2
Overlaps resistance (Peeling of overlap)	> 250	N/50mm	EN 12316-2
Overlaps resistance (Shear of overlaps)	> 600	N/50mm	EN 12317-2
Resistance to impact	> 700	mm	EN 12691
Resistance to static loading	> 55	Kg	EN 12730 Método B
Flexibility at low temperature	< -30	°C	EN 495-5
Resistance to root penetration	Pasa	Pasa/No Pasa	EN 13948
Humidity resistance factor	20.000 ± 30%	(m ² .s.Pa)/Kg	EN 1931
Watertightness	Pasa	Pasa/No Pasa	EN 1928 (B)

Pasa = Positive or correct No pasa = Negative PND = No performance determined - = Not necessary

ADDITIONAL TECHNICAL DATA

ADDITIONAL DATA	Declared Value	Unit	Norm
Straightness	< 50	mm	EN 1848-2
Flatness	< 10	mm	EN 1848-2
Visible defects	Pasa	Pasa/No Pasa	EN 1850-2
Length	15	m	EN 1848-2
Width	178	cm	EN 1848-2
Nominal minimum thickness	1.5 (-5%; +10%)	mm	EN 1849-2
Mass	2.0 (-5%; +10%)	kg/m ²	EN 1849-2
Longitudinal & transversal dimensional stability	< 0.09	%	EN 1107-2
Loss of plasticizers (mass change at 30 days)	< 4.5	%	EN ISO 177
Tear strength (UV 5000 h)	< 10	%	EN 1297, EN 12311-2
Static puncture resistance	> 1200	N	UNE 104416 (b)

DECLARATION OF CONFORMITY


DERIVADOS ASFÁLTICOS NORMALIZADOS S.A.
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José Antonio Manzarbeitia Valle
Manager Control and R&D Manager.
Guadalajara, July 15st 2008

STANDARDS & CERTIFICATION

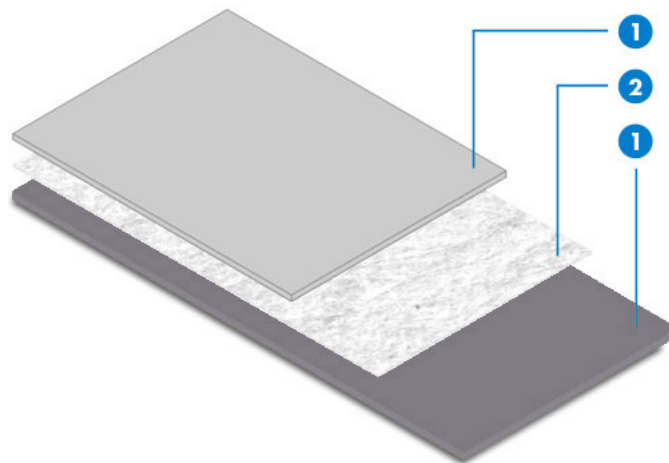
Membrane Danopol FV 1.5, complies with UNE-EN 13 956.
Membrane Danopol FV 1.5 , meets CE requirements.
Membrane Danopol FV 1.5 , complies with UNE-EN 104 416.
Membrane Danopol FV 1.5 , meets the requirements of the Technical Building Code (CTE).
Membrane Danopol FV 1.5, has zero slope DIT for zero slope DANOPOL No. 551/10 .

SCOPE

Mechanically fixed flat roof waterproofing systems for both new and existing buildings.
Commercial or industrial projects.

PRESENTATION

PRESENTATION	VALUE	UNIT
Reinforcement type	Glass fibre mat	-
Thickness	1.5	mm
Width	1.78	m
Length	15	m
Roll surface	26.7	m ²
Color	Light grey	-
Product Code	210029	-



1. Plasticized PVC
2. Fibre glass mat
1. Plasticized PVC

ADVANTAGES AND BENEFITS

ADVANTAGES:

- High dimensional stability.
- High tensile strength

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High puncture resistance - Very good resistance to micro-organisms, putrefaction, mechanical impact, root penetration, natural aging, weathering, UV radiation and swollen.

- Excellent flexibility

BENEFITS:

- Limit strains and tensions in the waterproofing membrane due to the high temperatures and temperature changes to which will see under flat roofs.
- Absorbs While structural movements.
- Presents antipunzonante good protection against mechanical damage, arising from the casual pedestrian own flat roofs.
- Very high durability with respect to possible degradation due to causes such as chemical.
- High capacity to adapt to the different forms of support.

INSTRUCTION FOR USE

Substrate preparation:

- The base support surface must be durable, uniform, smooth, be clean, dry and free from foreign bodies. In case of thermal insulation, plates were placed at matajuntas and without gaps between plates 1 mm.
- As a separating layer or protective polyester geotextiles are used, type Danofelt PY 300 or higher.
- Before issuing the membrane, mechanically fixing colamine profiles at both the horizontal and vertical face. The dimensional stability of the blade Danopol FV ($\leq 0.09\%$) allows anchorage is not needed to perform perimetry in the horizontal plane in the implementation of the systems made with the blade.
- In the vertical plane the profile is fixed so that the membrane lift a minimum of 20 cm above the pavement surface. Weld a strip of foil to the profile of vertical wall and overlaps and welds on the membrane of horizontal. Colamine profiles are recommended fitted on the top tab, type Profile colamine B (tab) to the anchor to the wall vertical. Stainless steel profiles can also be used, such as galvanized steel, aluminum, etc..
- The joint between the profile fixed to the wall and the upstream work, always sealed with an elastic filler and rot: Elastydan PU 40 Gris.

Singular points:

- The meeting of the cover with vertical faces and elements that span the membrane, it must climb at least 20 cm above the finished deck level or a higher level, if necessary, so that the upper edge of the membrane is always above the maximum water level expected in the deck. To improve the aesthetics of the finish on these points, you can use an adhesive, GLUE-DAN PVC, to attach the blade to the vertical face.
- When the height of plate not exceeding 20 cm, perimeter or wahoo there, delivering songs such breastplates or forging can be performed by a profile sheet at an angle colaminated, Profile colamine C (top with drip edge angle) to pick the outside of the cladding as a drip edge. This profile is set to the wall by horizontal wing, which has a width greater than 6 cm, with anchor located at distances of less than 25 cm. The membrane is welded to the profile sheet colaminated, so that the head of the screws are hidden.

Placement waterproofing layer:

- The membrane is loosely placed on the substrate and perpendicular to the line of maximum slope of the roof. The anchorage to the structural support must be determined by gravel ballast, slabs, pavement, ... The junction between plates, will perform well with welded thermoplastic hot air welding or THF using a chemical agent (tetrahydrofuran). The overlaps are at least 5 cm. solder and the bottom sheet with the top must be at least 4 cm. In the case of thermoplastic weld immediately after welding is pressed union with a roller, ensuring a homogeneous union. To check the connections will be a physical check using a blunt metal needle (with rounded tip with a radius between 1 mm and 3 mm), passing along the edge of the union.
- Loose rolls are arranged on the support of waterproofing (waterproof thermal insulation or old, if rehabilitation), starting with the lowest point of the flap of the cover and perpendicular to the line of maximum slope of the roof, forming a row of plate.
- Have the roll of the next row, the overlap welding. The placement of the plates must be such that no transverse overlap each row be aligned with any of those in adjacent rows.
- They must not join more than three blades on a single point.
- In tees (three blades that intersect at a point) is chamfering the bottom sheet to prevent capillary leakage or review with the hot air welder.
- The apex of the angle between the transverse and longitudinal edges of the top piece is cut in a curve.

INDICATIONS AND IMPORTANT RECOMMENDATIONS

- When delivery is made by colamine profiles fixed on the top edge of the band that goes by the facing should be fitted with a flange, at least in its upper part that forms the basis of a string or elastic and rot-proof seal with Elastydan PU 40 Grey, which covers the slot between the profile and the wall. If the tab has no bottom, the edge must be perfectly round, so that it will damage the blade.
- Anchorage wahoo: in the membranes fixed with strapping or profiles, they must be installed leaving the junction points in a clearance for the blade to absorb the movements caused by thermal effects. These clearances will be covered by a strip of the waterproofing layer, must be released over the slot.
- Anchorage on the encounter between two planes: the anchor is made linearly. Fixed line will be installed as close as possible to the corner and never will be located at a distance greater than 20 cm from the confluence or meeting.
- This product is part of a waterproofing system, so you should take into account all the documents referenced by Danosa Solutions Manual and all rules and mandatory law in this regard.
- Special attention should be paid to the implementation of the singular points, such as wahoo (meetings with vertical elements and emerging), drains, expansion joints, etc ...

HANDLING, STORAGE AND CONSERVATION

- Danopol FV 1.5 is not toxic or flammable.
- Danopol FV 1.5 is stored in a dry place protected from rain, sun, heat and low temperatures. Be kept in its original packaging, horizontal and parallel all the film (never crossed) on a support level and smooth.
- Danopol FV 1.5 will be used first come to work.
- Danopol FV 1.5 is easy to cut to adapt the size to work.
- No waterproofing works should be performed when weather conditions may be harmful, particularly when it is snowing or there is snow or ice on the deck when the cover is rain or wet surface moisture > 8% according QAT NTE or strong wind.
- No waterproofing works should be performed when the ambient temperature is less than - 5 ° C for hot air welding.
- In all cases, be taken into account Health and Safety standards at work and the rules of good construction practice.
- Danosa should consult the MSDS for this product is www.danosa.com permanently available, or can be obtained by writing to our Technical Department.
- For any further clarification, please contact our Technical Department.

WARNING

The information that appears in the following document makes reference to the uses and utilities of danosa's products and systems, and it is based on the knowledge that have been learnt until present, by Danosa. This is only possible if products have been stored and used in an appropriate way.

Nevertheless, Danosa is not responsible for unsuitable uses of the products neither any other facts, such as meteorological facts. So Danosa is just responsible for the quality related to the provided products.

Danosa reserves the right to carry out modifications without previous notice.

The values that appear in the technical sheet are the results of the tests that have been performed in our laboratory. December 2009.

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