

## DANOPOL FV 1.2 LIGHT GREY

DANOPOL FV 1.2 LIGHT GREY is a synthetic PVC plasticized membrane, reinforced with Fibre glass mat. Designed for flat roof waterproofing, U.V. resistant.



### TECHNICAL DATA

Characteristics	Declared Value	Unit	Norm
External fire performance	Froof	-	EN 13501-5
Reaction to fire	E	-	EN 13501-1
Longitudinal & transversal tensile strength	> 10	Mpa	-
Longitudinal & transversal tensile strength	> 600	N/50mm	EN 12311-2 Método A
Longitudinal elongation at break	> 200	%	EN 12311-2 Método A
Transversal elongation at break	> 200	%	EN 12311-2 Método A
Longitudinal resistance to tearing (nail shank)	> 120	N	EN 12310-2
Transversal resistance to tearing (nail shank)	> 120	N	EN 12310-2
Overlaps resistance (Peeling of overlap)	> 250	N/50mm	EN 12316-2
Overlaps resistance (Shear of overlaps)	> 500	N/50mm	EN 12317-2
Resistance to impact	> 500	mm	EN 12691
Resistance to static loading	> 50	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 <sup>2</sup> .s.Pa)/Kg	EN 1931
Watertightness	Pasa	Pasa/No Pasa	EN 1928 (B)
Heat and water durability 60 Kpa	PASA	Pasa/No Pasa	EN 1296
Chemical products and water durability, 60 Kpa	PASA	Pasa/No Pasa	EN 1847

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	20	m	EN 1848-2
Width	180	cm	EN 1848-2
Nominal minimum thickness	1.2 (-5%; +10%)	mm	EN 1849-2
Mass	1,5 (-5%; +10%)	kg/m <sup>2</sup>	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
Loss of elongation at break (UV 5000 h)	< 10	%	EN 1297, EN 12311-2
Static puncture resistance	> 1200	N	UNE 104416 (b)

### STANDARDS & CERTIFICATION

The membrane DANOPOL FV 1.2 LIGHT GREY, complies with EN 13956; EN 13967; EN 13361; EN 13491. EN 13362.

The membrane DANOPOL FV 1.2 LIGHT GREY, meets CE requirements.

The membrane DANOPOL FV 1.2 LIGHT GREY, has Environmental Product Declaration EPD No. S-P-00691.

The membrane DANOPOL FV 1.2 LIGHT GREY, has Agreement Certificate for zero slope BBA 14/5118.

The membrane DANOPOL FV 1.2 LIGHT GREY, has DIT for zero slope DANOPOL No. 551/10.

## SCOPE

Flat roof waterproofing, both new buildings and rehabilitations (EN 13956):

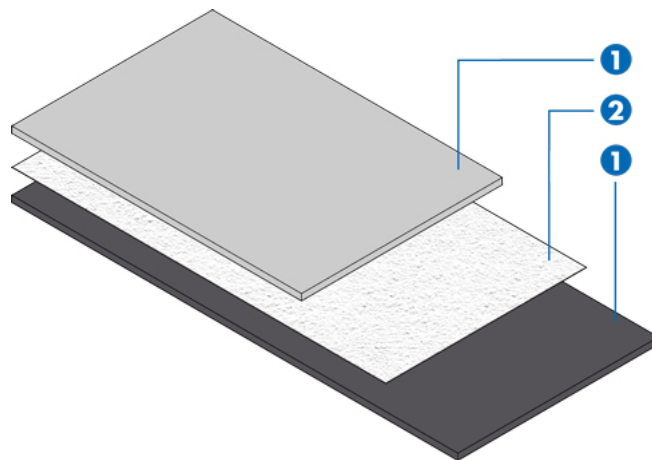
- Non walkable flat roof ballasted with gravel (inverted roof).
- Walkable flat roof (private use) with floating pavement DANOLOSA (inverted roof).
- Walkable flat roof (private use) with plot systems.
- Walkable flat roof (public and private use) with floor finish bedded on cement mortar.
- Intensive green flat roofs.
- Extensive green flat roofs (eco).

Civil work waterproofing:

- Basement waterproofing (EN 13967).
- Waterproofing fluid barrier in the construction of tunnels and associated underground structures (EN 13491).
- Reservoirs and dams waterproofing (EN 13361).
- Canals waterproofing (EN 13362).

## PRESENTATION

PRESENTATION	VALUE	UNIT
Reinforcement type	Glass fibre mat	-
Thickness	1.2	mm
Width	1.80	m
Length	20	m
Roll surface	36	m <sup>2</sup>
Color	Light grey	-
Product Code	210027	-



1. Plasticized PVC
2. Fibre glass mat

## ADVANTAGES AND BENEFITS

### ADVANTAGES:

- High dimensional stability.
- High tensile strength
- High puncture resistance
- Very good resistance to micro-organisms, putrefaction, mechanical impact, root penetration, natural aging, weathering, UV radiation and swollen.
- Excellent flexibility

### BENEFITS:

- Limits strains and tensions in the waterproofing membrane due to the high temperatures and temperature changes to which will see under flat roofs.
- Absorbs structural movements.
- Presents good puncture protection to mechanical damage, derived from pedestrian transit, common in flat roofs.
- Very high durability to possible degradation related to chemical cases.
- High adaptability to different kind of supports.

## INSTRUCTION FOR USE

### Substrate preparation:

- - The base support surface must be resistant, uniform, smooth, clean, dry and free of foreign bodies.
- In case that the support consist on thermal insulation, boards must be placed staggered and without gaps wider than 1 mm.
- Polyester geotextil Danofelt PY 300, or higher will be used as separation or protection layer.
- DANOPOL FV dimensional stability ( $\leq 0,09\%$ ) allows no perimeter anchorage installation on the horizontal plane for ballasted systems performed with this waterproofing membrane, meeting standard UNE 104416.
- The joint between the fixed profile and the vertical surface must be always sealed with the elastic, rot-proof and non-biodegradable selant ELASTYDAN PU 40 Gris.

### Singular Details

- At the vertical perimeter's connection, membrane must go up the vertical surface at least 20cm above roof's last layer, or higher, if necessary, to ensure that the upper edge of the membrane remains always above the maximum foreseeable water over the roof.
- Adhesive product GLUE-DAN PVC is recommended to improve aesthetic finishing on the vertical plane.
- To improve overlaps resistance, particularly in green roofs, it is advisable to seal the overlap line using LIQUID DANOPOL, in the same color, applied with a construction bottle.
- When the parapet's height does not exceed 20 cm, or there is no perimeter parapet, connection between horizontal membrane and parapet or slab edge can be achieved using PVC laminated profile C (angle) .
- This profile shall be fixed to the horizontal wall by its wing, which will have one width greater than 6 cm, using anchors at a distance less than 25 cm from each other. The membrane must be welded to the laminated profile, hiding all the screw heads

### Waterproofing membrane placement:

- The membrane will be loose-laid placed over the support and perpendicular to the roof maximum slope line, from the lowest point to the top of the roof. Anchorage to the structural support will be done by slab, gravel or pavement ballasting.
- The watertightness between DANOPOL membranes will be achieved through thermoplastic welding with hot air welder, or using chemical agent THF (tetrahydrofuran). The overlaps between membranes must be 5 cm minimum and the welding must be at least 4cm. During the thermoplastic welding, use a silicon pressure roll. After the installation, it is recommendable to use a blunt metal needle (with a 1-3mm head radius), passing it along the union edge, verifying all the connections.
  - There should not be more than 3 membranes coinciding in a single point.
  - Special attention will be paid to T-Joints (three sheets intersecting at the same point).
  - All membrane vertexes will be cut in a curve shape.

## INDICATIONS AND IMPORTANT RECOMMENDATIONS

- Incompatible materials in direct contact with DANOPOL FV 1.2 LIGHT GREY waterproofing membrane: Bituminous products, XPS, EPS, EPDM, PU. DANOFELT PY300 or higher must be placed between both materials to avoid chemical incompatibility or smooth any coarse surface.
- Make sure the chemical compatibility of DANOPOL FV 1.2 LIGHT GREY with other materials.
- Weldability and weld quality depends on atmospheric conditions (temperature, humidity), welding conditions (temperature, velocity, pressure, cleanliness) and by the state of the membrane surface (cleanliness, humidity). Therefore must meet the hot air machine for the correct assembling
- Once the surface has been cooled, a strict welding control should be made using a blunt needle.
  
- This product is part of a waterproofing system, please pay attention to all DANOSA documents and all rules and mandatory law in this regard.
- Special attention should be paid to the implementation of the singular points and special details.

## HANDLING, STORAGE AND CONSERVATION

- DANOPOL FV 1.2 LIGHT GREY is not toxic or flammable.
- DANOPOL FV 1.2 LIGHT GREY should be 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 1.2 LIGHT GREY will be used first come to work.
- DANOPOL FV 1.2 LIGHT GREY 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% as 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 recommends to consult the MSDS of this product, which is available permanently at [www.danosa.com](http://www.danosa.com) 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. April 2017 .

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