

## DANOPOL HS 1.5 DARK GREY

DANOPOL HS 1.5 DARK GREY is a synthetic PVC plasticized membrane, reinforced with polyester net carrier. Designed for flat roof waterproofing, U.V. resistant.



### TECHNICAL DATA

Characteristics	Declared Value	Units	Norm
External fire performance	Broof(t3)-Broof (t1)	-	EN 13501-5
Reaction to fire	E	-	EN 13501-1
Longitudinal & transversal tensile strength	> 1100	N/50mm	EN 12311-2 Método A
Longitudinal tear strength	> 20	%	EN 12311-2 Método A
Transversal tear strength	> 20	%	EN 12311-2 Método A
Longitudinal resistance to tearing (nail shank)	> 250	N	EN 12310-2
Transversal resistance to tearing (nail shank)	> 250	N	EN 12310-2
Overlaps resistance (Peeling of overlap)	> 250	N/50mm	EN 12316-2
Overlaps resistance (Shear of overlaps)	> 950	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	PND	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)

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

### ADDITIONAL TECHNICAL DATA

ADDITIONAL DATA	Declared Value	Units	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	180	cm	EN 1848-2
Nominal minimum thickness	1.5 (-5%; +10%)	mm	EN 1849-2
Mass	2.0 (-5%; +10%)	kg/m <sup>2</sup>	EN 1849-2
Longitudinal & transversal dimensional stability	< 0.3	%	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)

### STANDARDS & CERTIFICATION

The membrane DANOPOL HS 1.5 DARK GREY, complies with UNE-EN 13956.

The membrane DANOPOL HS 1.5 DARK GREY, meets CE requirements.

The membrane DANOPOL HS 1.5 DARK GREY, complies with UNE-EN 104416.

The membrane DANOPOL HS 1.5 DARK GREY, has Environmental Product Declaration EPD No.S-P-00691.

The membrane DANOPOL HS 1.5 DARK GREY, available for mechanical fixing BBA Agrément Certificate 14/5118.

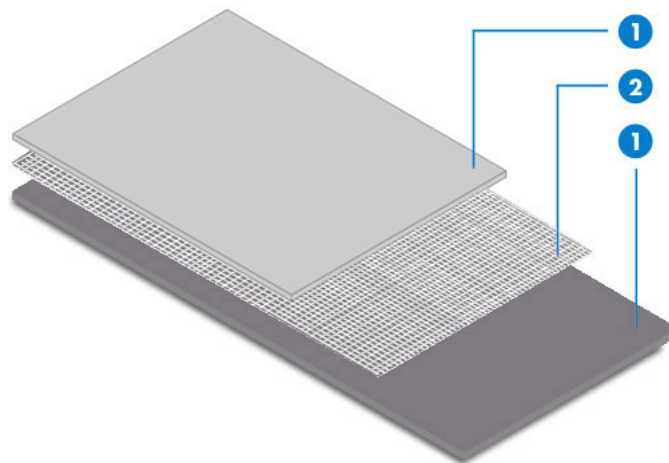
The membrane DANOPOL HS 1.5 DARK GREY, available for mechanical fixing DANOPOL HS FM N° 10/0054.

### SCOPE

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

## PRESENTATION

PRESENTATION	VALUE	UNIT
Reinforcement type	Polyester net	-
Thickness	1.5	mm
Width	1.80	m
Length	15	m
Roll surface	26.7	m <sup>2</sup>
Color	Dark grey	-
Product Code	210033	-



1. Plasticized PVC
2. polyester net

## ADVANTAGES AND BENEFITS

### ADVANTAGES:

- Excellent resistance to tearing.
- 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:

- Improves performance in mechanically fastened sheets, assuming a high value of resistance to wind suction, optimizing the fixation density.
- Limits strains and tensions in the waterproofing membrane caused by high temperatures and temperature changes, very common in 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 durable, uniform, smooth, be clean, dry and free from foreign bodies.
- As a separating layer or protective polyester geotextiles are used, type Danofelt PY 300 or higher.

### Placement waterproofing layer:

- DANOPOL HS 1.5 DARK GREY Waterproofing membrane can be welded by hot air or by chemical THF bonding (Tetrahydrofuran)
- During the installation, the membrane's serigraphed face must remain in sight.

## INDICATIONS AND IMPORTANT RECOMMENDATIONS

- Make sure the chemical compatibility of DANOPOL HS 1.5 DARK 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, 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.

## HANDLING, STORAGE AND CONSERVATION

- DANOPOL HS 1.5 DARK GREY is not toxic or flammable.
- DANOPOL HS 1.5 DARK 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 HS 1.5 DARK GREY will be used first come to work.
- DANOPOL HS 1.5 DARK 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 TIKIDAN's products and systems, and it is based on the knowledge that have been learnt until present, by TIKIDAN. This is only possible if products have been stored and used in an appropriate way.

Nevertheless, TIKIDAN is not responsible for unsuitable uses of the products neither any other facts, such as meteorological facts. So TIKIDAN is just responsible for the quality related to the provided products. TIKIDAN 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. May 2016.