DANOPOL HS 1.2

Single Ply PVC-p 1.2 mm membrane. Mechanically Fixed.

BBA 14/5118 (1)

EPD S-P-00691

ETE 10/0054

DANOPOL HS 1.2 is a synthetic PVC plasticized membrane, reinforced with polyester net carrier. Designed for flat roof waterproofing, U.V. resistant.

Presentation

- Length (cm): 2500
- Length measurement standard: EN 1848-2
- Width (cm): 108
- Width measurement standard: EN 1848-2
- Colour: Light grey
- Thickness (mm): 1,2
- Surface (m^2): 27
- Product code: 210067

Technical Data

Concept	Value	Standard
Mass per unit area (nominal) (kg/m^2)	1.5	-
Longitudinal elongation at break (%)	> 50	-
Transversal elongation at break (%)	> 70	-

Concept	Value	Standard
External fire behaviour	Broof (t1) - Broof (t3) - Broof (t4)	EN 13501-5
Longitudinal & transversal dimensional stability	< 0.3	EN 1107-2
Water vapour permeability (m)	47.000 ± 30%	EN 1931
Flexibility at low temperature (ºC)	< -30	EN 495-5
Reaction to fire	E	EN 13501-1
Resistance to static loading (kg)	> 50	-
Resistance to static loading; method B (hard support) (kg)	> 50	EN 12730 Método B
Resistance to root penetration	Pasa	EN 13948
Longitudinal & transversal tensile strength (N/5cm)	> 1000	EN 12311-2 Método A
Longitudinal resistance to tearing (nail shank) (N)	> 200	EN 12310-2
Transversal resistance to tearing (nail shank) (N)	> 200	EN 12310-2
Resistance to impact, A (mm)	> 500	EN 12691
Overlaps resistance (Shear of overlaps) (N/50mm)	> 800	EN 12317-2
Overlaps resistance (Peeling of overlap) (N/50mm)	> 250	EN 12316-2
Hazardous substances	PND	-

Addtitional Technical Data

Concept	Value	Standard
Visible defects	Pasa	EN 1850-2
Nominal minimum thickness	1.2 (-5%; +10%)	EN 1849-2
Mass (kg/m²)	1,5 (-5%; +10%)	EN 1849-2
Loss of elongation at break (UV 5000 h)	< 10< 10	EN 1297, EN 12311-2EN 1297, EN 12311-2
Loss of plasticizers (mass change at 30 days) (%)	< 4.5	EN ISO 177
Flatness (mm)	< 10	EN 1848-2

Concept	Value	Standard
Straightness (mm)	< 50	EN 1848-2
Resistance to static punching (N)	> 1200	UNE 104416 (b)

Environmental Information

Concept	Value	Standard
Post-consumer recycled content (%)	NDP	-
Pre-Consumer recycled content (%)	NDP	-
Manufactured in	Fontanar - Guadalajara (España)	-

Scope

- Channel waterproofing (EN 13362).
- Mechanically fastened roof waterproofing systems (EN 13956).
- Waterproofing of reservoirs and dams (EN 13361).
- Waterproofing against fluids in the construction of tunnels and underground structures (EN 13491).

Advantages & Benefits

- Good absorption of structural movements.
- High tensile strength.
- High resistance to piercing.
- Hot air welded: Flame-free system
- Great elasticity.
- High resistance to tearing.
- Allows for adaptation to any type of geometry.
- UV resistant.
- System with Environmental Product Declaration (EPD), type 3 ecolabel.
- System fixed by metallic, plastic or induction fixation.

Support

- Deck-type metal roof.
- Overlays*
- Insulation panels.*
- Concrete subsrates.
- Wooden subsrates.
- Mortar subsrates.

Instruction for Use

Preparation of the substrate:

- The surface of the base substrate shall be resistant, uniform, smooth, clean, dry and free of foreign

bodies. In the case of thermal insulation, the boards shall be laid in a grid and without gaps of more than 1 mm between boards.
- Polyester geotextiles, type Danofelt PY 300 or higher, shall be used as a separating or protective layer.
- Before the membrane is laid out, laminated profiles shall be mechanically fastened both in the horizontal plane and on the vertical face. If the membrane has a dimensional stability variation of 0.09%, anchoring to the horizontal plane is not necessary.
- The horizontal plane profile shall be installed as close as possible to the angle and shall never be located at a distance of more than 20 cm from the junction. In the vertical plane the profile is fixed so that the membrane rises a minimum of 20 cm above the surface of the pavement. The membrane is welded to the profile in the horizontal plane. A strip of sheeting is then welded to the profile of the vertical facing and overlapped and welded to the membrane in the horizontal plane. In this solution, the sheeting that goes up the vertical face must have the same characteristics as that of the horizontal plane.
- The joint between the profile fixed to the facing and the masonry facing is always sealed with an elastic and rot-proof mastic.

Singular points:

- Where the roof meets vertical faces and elements that pass through the membrane, the membrane must rise at least 20 cm above the finished roof level, or a greater height if necessary, so that the upper edge of the membrane is always above the maximum foreseeable water level on the roof. To improve the aesthetics of the finish at these points, an adhesive, GLUE-DAN PVC, can be used to adhere the sheet to the vertical facing.
- When the height of the parapet does not exceed 20 cm, or there is no perimeter parapet, the delivery to these parapets or edges of the slab, can be made by means of a laminated sheet profile in the form of an angle, C-laminated profile (angle with drip cap) that hangs on the outside of the facing in the form of a drip cap. This profile shall be fixed to the facing by its horizontal flange, which shall be wider than 6 cm, by means of anchors located at a distance of less than 25 cm from each other. The membrane shall be welded to the laminated sheet metal profile in such a way that the head of the screws is concealed.

Laying of the waterproofing membrane:

- The membrane shall be laid perpendicular to the maximum slope line of the roof. The anchoring to the structural support must be carried out by means of mechanical fastening. The joint between sheets shall be made by thermoplastic welding with a hot air welder. The overlaps shall be at least 10 cm to cover the mechanical fixing and the welding of the lower sheet with the upper one shall be at least 4 cm. Immediately after welding, the joint shall be pressed with a roller, thus ensuring a homogeneous joint. To check the joints, a blunt metal needle (with a rounded tip with a radius between 1 mm and 3 mm) shall be used to physically check the joints by passing it along the edge of the joint.
- The rolls are laid loosely on the waterproofing substrate (thermal insulation or old waterproofing, in the case of renovation), starting at the lowest point of the roof slope and perpendicular to the line of maximum slope of the roof, forming a row of sheeting.
- During installation, the screen-printed side of the film must remain in the open.
- It is mechanically fixed in the longitudinal overlap area that will later be covered by the next row of sheeting (highest part of the roof). The distance from the edge of the fixing washer to the edge of the sheet shall be greater than 1 cm.
- The roll of the next row is laid out, welding the overlap where the fasteners are located. The sheets shall be laid in such a way that no transverse overlap of each row is aligned with any of those of the adjoining rows.
- The roll of the next row is mechanically fixed on the other edge, with the same premises as described above. No anchoring line should be more than 2 metres away from the adjoining lines.
- In the mechanical fastening, together with the waterproofing membrane, the underlay layers, such

as vapour barrier, thermal insulation, etc., are fastened individually or simultaneously.
- The sheet fixings at the perimeter of the roof must be aligned parallel to the perimeter of the roof.
- No more than three sheets shall be joined at any one point.
- At T-joints (three sheets intersecting at one point) the bottom sheet shall be chamfered to prevent capillary leakage or be reworked with the hot air welder.
- The apex of the angle formed by the transverse and longitudinal edges of the top piece shall be cut into a curve.

Handling, storage and preservation

- The product must be stored in a dry place protected from rain, sun, heat and low temperatures.
- The product will be used on a first-come, first-served basis.
- This product is not toxic or flammable.
- Easy to cut to adapt the dimensions to the work.
- Waterproofing work must not be carried out when weather conditions may be detrimental, in particular when it is snowing or there is snow or ice on the roof, when it is raining or the roof is wet, surface dampness >8% according to NTE QAT, or when a strong wind is blowing.
- No welding work should be carried out when the ambient temperature is lower than -5ºC for hot air welding, nor lower than + 5ºC for welding with THF or with Adhesives.
- It shall be kept in its original packaging, in a horizontal position and all rolls parallel (never crossed), on a flat and smooth support.
- Danosa recommends consulting the safety data sheet for this product, which is permanently available at danosa.com, Knowlegde Portal, or it can be requested from our Technical Department.
- In all cases, the Occupational Safety and Hygiene standards, as well as the standards of good construction practice, must be taken into account.
- For further information, please contact our Technical Department.

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