DANOPOL DW HS 1.2 BIO

Single Ply PVC-p 1.2 mm membrane.
Suitable for drinking water tanks.
Mechanically Fixed.

DANOPOL DW HS 1.2 BIO is a synthetic PVC plasticized membrane, light blue, reinforced with polyester net carrier. Designed for drinkable water tanks waterproofing, incorporates biocides in its formulation to prevent the formation of algae, fungi and any other type of organisms harmful to humans. U.V. resistant.

Presentation

- Length (cm): 2000
- Length measurement standard: EN 1848-2
- Width (cm): 180
- Width measurement standard: EN 1848-2
- Thickness (mm): 1.2
- Surface (m^2): 36
- Product code: 210079

Technical Data

Concept	Value	Standard
Mass per unit area (nominal) (kg/m^2)	1.5	-
Density (kg/m^3)	1250	-
Longitudinal elongation at break (%)	> 200	-
Transversal elongation at break (%)	> 200	-
Elongation at maximum force, longitudinal (%)	> 15	EN 12311-2 Método A
Elongation at maximum force, transverse (%)	> 15	EN 12311-2 Método A
Longitudinal & transversal dimensional stability	< 3.0	EN 1107-2

Concept	Value	Standard
Water vapour permeability (μ)	47.000 ± 30%	EN 1931
Flexibility at low temperature (ºC)	< -30	EN 495-5
Reaction to fire	E	EN 13501-1
Resistance to root penetration	PND	EN 13948
Longitudinal & transversal tensile strength (N/5cm)	>1000	EN 12311-2 Método A
Longitudinal resistance to tearing (nail shank) (N)	> 60	EN 12310-2
Transversal resistance to tearing (nail shank) (N)	> 50	EN 12310-2
Overlaps resistance (Shear of overlaps) (N/50mm)	> 300	EN 12317-2
Overlaps resistance (Peeling of overlap) (N/50mm)	> 40	EN 12316-2

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
Straightness (mm)	< 50	EN 1848-2

Environmental Information

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

Standards and Certification

- Complies with Royal Decree RD 3/2023, of January 10, which establishes the technical-sanitary criteria for the quality of drinking water, its control and supply.
- These tests have been carried out by external auditors and are regularly verified by factory self-checks.

Scope

- Waterproofing of drinking water tanks (suitable for outdoor use) in accordance with Royal Decree 3/2023, of January 10, which establishes the technical-sanitary criteria for the quality of drinking water.

Advantages & Benefits

- Good absorption of structural movements.
- High tensile strength.
- High resistance to piercing.
- Food and drinking water contact sheet, tested and proven by the use of virgin raw materials, no recycled materials.
- Very good resistance to micro-organisms, rot, mechanical impact, natural ageing and swelling.

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.
- Polyester geotextiles, type Danofelt PY 300 or higher, shall be used as a separating or protective layer.
- DANOSA recommends a solution that is not adhered to the substrate, welding the overlaps with a hot air machine and pressure roller.

STRONG>Laying the waterproofing sheet:

- The joint between sheets shall be made by means of thermoplastic welding, with a hot air welder. The overlaps shall be at least 5 cm 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.
- On the vertical and horizontal perimeter, laminated plates mechanically fixed to the substrate shall be used in order to weld the waterproofing sheet on its surface. If the tank is more than 2 metres deep, it is recommended that intermediate laminated sheets be used on the vertical face to ensure the flatness of the sheet.
- A laminated profile fixed to the vertical face should be used to crown the tank, and the sheet should then be welded to its surface. The profile shall be sealed with ELASTYDAN 40 PU Grey polyurethane mastic or equivalent, never in contact with the sheet or the water contained in the tank.

Indications and Important Recommendations

- The fastening element must be suitable for the material of which the support is made. The tensile strength of the fastener to the load-bearing support shall be checked to ensure proper mechanical attachment. The fasteners must withstand a permissible tensile load greater than 600 N per anchorage point. As the membrane is the outermost element of the waterproofing system, its stability against dynamic wind pressure must be calculated according to the shape of the building, its height above ground, its topographical situation, and the specific roof area.
- In the particular case of waterproofing drinking water reservoirs, the estimated durability of the waterproofing sheets will be conditioned, at all times, by the correct maintenance of the water by the end user.
- In renovation projects on old waterproofing, it may be necessary to remove existing materials or to use suitable separating layers.
- A range of ancillary products is available for use with the membrane (Elastydan PU 40 Grey sealant, DANOPOL ADHESIVE adhesive, laminated profiles, corners, corners, corners, cups, pipe penetrations, etc.).
- The weldability and quality of the weld depend on atmospheric conditions (temperature, dampness), welding conditions (temperature, speed, pressure, pre-cleaning) and on the surface condition of the membrane (cleanliness, dampness). Therefore, the hot air machine must be adjusted to obtain a correct assembly.
- To avoid chemical incompatibilities, a DANOFELT PY 300 or higher geotextile separating layer shall be placed between the membrane and the geotextile: Bituminous products, synthetic TPO/FPO and EPDM, extruded (XPS) or expanded (EPS) polystyrene-based products, rigid or foamed PU, etc.
- After the surface has cooled down, the welds shall be carefully checked by means of a punch. If any irregularity is detected in a hot air weld, it shall be reworked with the same procedure as described above.
- Appropriate safety measures must be taken as welding work can give off fumes which can be irritating.

Handling, storage and preservation

- The product must be stored in a dry place protected from rain, sun, heat and low temperatures.
- It shall be kept in its original packaging, in a horizontal position and all rolls parallel (never crossed), on a flat and smooth support.

Notice

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