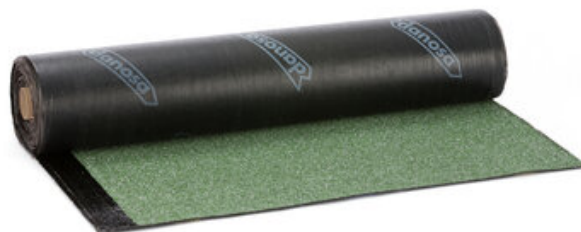


ESTERDAN PLUS 50/GP ELAST GREEN GARDEN

SBS elastomeric 5 kg/m² capping sheet. Root Inhibitor. Torch Applied.



EPD[®]



EPD S-P-01493

Bituminous SBS modified capsheet reinforced with a non-woven polyester felt. Includes root-resistant additive for living roof specifications. The upper surface is finished with grey-green mineral chippings. The underside has a quick-melt thermofusible film. Designed for torch-applied applications and Safe2Torch details using hot-air.

Presentation

- Length (cm): 800
- Width (cm): 100
- Colour: Green
- Thickness (mm): 3.5(SOLAPO)
- Product code: 141306

Technical Data

Concept	Value	Standard
Mass per unit area (nominal) (kg/m ²)	5	-
External fire behaviour	Broof(t1)	UNE-EN 1187; UNE-EN 13501-5
Durability flexibility	-5 ± 5	-
Creep durability (°C)	100 ±10	UN-EN 1110
Elongation at break longitudinal (%)	45 ±15	UNE-EN 12311-1
Elongation at transverse break (%)	45 ±15	UNE-EN 12311-1
Water vapour resistance factor (μ)	20.000	UNE-EN 1931

Concept	Value	Standard
Low temperature flexibility (°C)	<-15	UNE-EN 1109
Reaction to fire	E	UNE-EN 11925-2; UNE-EN 13501-1
Resistance to static loading (kg)	>15	UNE-EN 12730
Resistance to root penetration	Pasa	UNE-EN 13948
Longitudinal tensile strength (N / 5cm)	700 ± 200	UNE-EN 12311-1
Transverse tensile strength (N / 5cm)	450 ± 150	UNE-EN 12311-1
Longitudinal resistance to tearing (nail shank) (N)	NPD	UNE-EN 12310-1
Transversal resistance to tearing (nail shank) (N)	NPD	UNE-EN 12310-1
Resistance to impact, A (mm)	>900	UNE-EN 12691
Resistance to impact, B (mm)	>1000	-
Joint Strength: Welding Shear	450 ± 150	UNE-EN 12317-1
Hazardous substances	NPD	-
Resistance to root penetration	Pasa	UNE-EN 13948

Additional Technical Data

Concept	Value	Standard
Density (kg/m³)	1428	-
Adhesion of granules (%)	<30	UNE-EN 12039
Creep resistance at high temperatures (°C)	>100	UN-EN 1110
Durabilidad UV; calor y agua: Fluencia a alta temperatura (°C)	100 ± 10	-

Environmental Information

Concept	Value	Standard
Volatile organic compounds (COV's) (µg/m³)	50 (A+)	ISO 16000-6:2006
Post-consumer recycled content (%)	35	-
Manufactured in	Fontanar - Guadalajara (España)	-

Standards and Certification

- In accordance with the UNE-EN 13707 standard 'Flexible sheets for waterproofing - Reinforced bitumen sheets for roof waterproofing - Definitions and characteristics'.
- In accordance with the UNE-EN 13969 standard for 'Flexible sheets for waterproofing - Bitumen damp proof sheets including bitumen basement tanking sheets - Definitions and characteristics'.
- Complies with CE marking requirements.
- DIT 550R/16 "ESTERDAN PENDIENTE ZERO".
- DIT 567R/16 "ESTERDAN - SELF DAN - POLYDAN UNDERGROUND STRUCTURES".
- DIT 569R/16 "POLYDAN TRAFFIC ROLLED".

Scope

- Tanking membrane.
- Capsheet in multi-layer waterproofing systems.
- Top sheet in two-layer membranes for waterproofing of roofs with heavy bonded, unbonded or floating protection.
- Single-layer membrane for waterproofing intensive and extensive green roofs.
- Single-layer membrane for waterproofing roofs with heavy bonded, unbonded or floating protection.

Advantages & Benefits

- High resistance to static and dynamic piercing.
- The mineral finish gives the membrane UV resistance.
- High resistance to root penetration.
- High tensile strength and high elongation at break.
- High resistance to tearing.
- Total impermeability to water and water vapour.
- Rot-proof.
- Very stable in the long term.
- Allows for adaptation to any type of geometry.

Support

- Old bitumen membranes.
- Concrete substrates.
- Mortar substrates.

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 with no gaps between boards greater than 0.5 cm.

- Top layer of multi-layer membranes with mineral self-protection. The sheet is laid in the same direction as the bottom sheet, with the overlap line offset by approximately half of the roll. The sheet is fully welded to the bottom sheet with a blowtorch. The overlaps are to be welded, and will be 8 ± 1 cm in the longitudinal direction and 10 ± 1 cm in the transverse direction. To join the transversal overlap at the ends of the rolls, it is necessary to previously heat the transversal edge of

the lower sheet in a strip of 10 cm, eliminating or embedding the protection aggregate in the bituminous mass and then weld the end of the following piece.

- Waterproofing of walls. The rolls are placed in a vertical position. The adhesion of the film to the substrate is done with a blowtorch. A bituminous primer (Curidán, Impridán 100, Maxdán or Maxdán Caucho) is applied beforehand. The overlaps are to be welded, and shall be 8 ± 1 cm in the longitudinal direction and 10 ± 1 cm in the transversal direction. To join the transversal overlap at the ends of the rolls, it is necessary to previously heat the transversal edge of the lower sheet in a strip of 10 cm, eliminating or embedding the protection aggregate in the bituminous mass and then welding the end of the following piece. For easier installation, it is recommended to cut the rolls into smaller, more manageable dimensions.
- Self-protected single-layer membrane, adhered system. The adhesion of the membrane to the substrate is done with a blowtorch. In the case of mortar or concrete substrates, a bituminous primer (Curidán, Impridán 100, Maxdán or Maxdán Caucho) must be applied beforehand. If the substrate is a weldable thermal insulation board, i.e. asphalt-finished (Rocdán A or Rocdán PIR VA), no primer is required. The overlaps must be welded, and shall be 8 ± 1 cm in the longitudinal direction and 10 ± 1 cm in the transverse direction. To join the transversal overlap at the ends of the rolls, it is necessary to previously heat the transversal edge of the lower sheet in a strip of 10 cm, eliminating or embedding the protection aggregate in the bituminous mass and then weld the end of the following piece.
- Waterproofing of walls. First apply a bituminous primer (Curidán, Impridán 100, Maxdán or Maxdán Caucho). For ease of installation, it is recommended to cut the rolls into smaller, more manageable dimensions, adjusting them to the width of the wall.

Indications and Important Recommendations

- In case of new construction and renovation, possible chemical incompatibilities with APP plastomer-modified bitumen sheets shall be taken into account.
- In case of refurbishment, chemical incompatibilities with old waterproofing systems consisting of PVC membranes, modified tar-based mastics or any other, shall be taken into account, and it may be necessary to remove them completely or to use suitable separating layers.
- If it is necessary to adhere to metallic or slightly porous elements, a bituminous primer (IMPRIDAN 100) shall be applied to the entire surface to be welded beforehand.
- In the case of large trees and/or large root tissue, the membrane shall be protected (horizontal section and junctions with vertical walls) with a layer of reinforced concrete.
- This product may form part of a waterproofing system, so all the documents referred to in the Danosa Solutions Manual must be taken into account, as well as all the regulations and legislation that must be complied with in this respect.
- Self-protected sheets in coloured mineral or ceramic granules may have different colour shades depending on the different production batches. The mineral granule may darken naturally over time.
- There is no chemical incompatibility between the Danosa range of SBS elastomeric bitumen and APP plastomeric bitumen membranes.
- The planting of palms, palm trees, cypresses and bamboos is not recommended.
- For any questions about prohibited and/or non-recommended plants, please consult our Technical Department.
- Possible incompatibility between thermal insulation and waterproofing shall be checked.
- A separating layer (DANOFELT or DANODREN) shall be laid before laying the heavy protection (paving, gravel, topsoil, etc).
- Special attention must be paid to the execution of the singular points, such as parapets (meetings with vertical and emergent elements), drains, expansion joints, etc.
- Polyurethane foam shall not be sprayed directly on top of the waterproofing without the use of a suitable separating layer (geotextiles, mortar layers, polyethylene film, etc).
- If expansion that could affect the sheet is expected, a geotextile separating layer (Danofelt PY 200) shall be used between the sheet and the extruded polystyrene insulation panels, so that each

product expands independently.

- NOTE: For more information on the Danosa systems in which this product is used, please see the document "Waterproofing Solutions".

Maintenance Recommendations

- Please refer to DANOSA UK Technical Statement 'Flat Roof Waterproofing – Cleaning and Maintenance Recommendations'

Warning

- Do not apply on wet or frozen surfaces.

Handling, storage and preservation

- Before moving the pallet, check the condition of the shrink-wrap and reinforce if necessary.
- The product must be stored in a dry place protected from rain, sun, heat and low temperatures.
- The product must be stored in an upright position.
- Handle with a crane with a protective net.
- Pallets shall not be stacked on top of each other.

Notice

- The information contained in this document and any other advice provided, are given in good faith, based on DANOSA's current knowledge and experience when products are properly stored, handled and applied, in normal situations and in accordance with the recommendations of DANOSA. The information applies only to the application (s) and the product (s) to which reference is expressly made. In case of changes in the parameters of the application, or in case of a different application, consult the DANOSA Technical Service before using the DANOSA products. The information contained herein does not exonerate the responsibility of the building agents to test the products for the application and intended use, as well as their correct application in accordance with current legal regulations. The product images used in our communications are indicative and may differ slightly in color and aesthetic appearance in relation to the final product. Orders are accepted in accordance with the terms of our current General Sales Conditions. DANOSA reserves the right to modify, without prior notice, the data reflected in this documentation. Website: **www.danosa.com** E-mail: **info@danosa.com** Telephone: **+34 949 88 82 10**