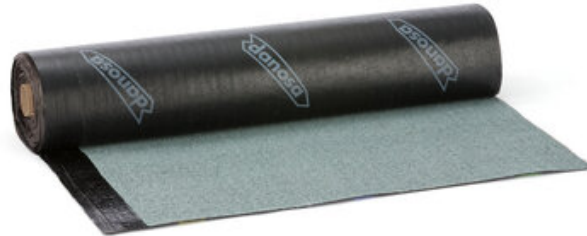


## ESTERDAN 50/GP POL

Waterproofing sheet of polymer modified bitumen with mineral self-protection.



ESTERDAN 50/GP POL is a waterproofing bituminous sheet with self-protected surface of 5 kg/m<sup>2</sup>.rComposed of a reinforced polyester felt reinforcement, covered on both sides with polymer modified bitumen mastic. On the upper side of the sheet, mineral protection in grey (black) colour is used as protective material. The anti-adhesive material used on the lower side is polyethylene film.

### Presentation

- Width (cm): 100
- Color: Gris
- Thickness (mm): 3.5 (SOLAPO)
- Length (cm): 800
- Código de producto: 141984

### Technical Data

Concept	Value	Norm
External fire behaviour	Broof(t1)	UNE-EN 1187
Density (kg/m <sup>3</sup> )	1428	-
Durability flexibility	-5 ± 5	-
Creep durability (°C)	120 ±10	UN-EN 1110
Longitudinal traction durability (N / 5cm)	700 ± 200	-
Transversal tensile durability (N/5cm)	450 ± 150	-
Elongation at break longitudinal (%)	45 ±15	UNE-EN 12311-1

Concept	Value	Norm
Elongation at transverse break (%)	45 ±15	-
Humidity resistance factor	20.000	UNE-EN 1931
Low temperature flexibility (°C)	<-15	UNE-EN 1109
Mass per unit area (nominal) (kg/m <sup>2</sup> )	5	-
Reaction to fire	E	UNE-EN 11925-2; UNE-EN 13501-1
Resistance to root penetration	No pasa	-
Longitudinal tensile strength (N / 5cm)	700 ± 200	-
Transverse tensile strength (N / 5cm)	450 ± 150	-
Longitudinal resistance to tearing (nail shank) (N)	NPD	-
Transversal resistance to tearing (nail shank) (N)	NPD	-
Hazardous substances	PND	-

## Additional Technical Data

Concept	Value	Norm
Adhesion of granules (%)	<30	UNE-EN 12039
Dimensional stability at elevated temperatures (longitudinal) (%)	<0.5	UNE-EN 1107-1
Dimensional stability at high temperatures (transversal) (%)	<0.5	-
Creep resistance at high temperatures (°C)	>130	UN-EN 1110

## Application Data

Concept	Value
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## Environmental Information

Concept	Value	Norm
Volatile organic compounds (COV's) (µg/m <sup>3</sup> )	50 (A+)	ISO 16000-6:2006
Recycled content afterword the consumer (%)	35	-
Manufactured in	Fontanar	-

## Standards and Certification

- In accordance with the UNE-EN 13707 standard for flexible sheets for waterproofing. Reinforced

bituminous sheets for roof waterproofing. Definitions and characteristics.

- In accordance with the UNE-EN 13969 standard for flexible sheets for waterproofing. Bituminous anti-capillary sheets including bituminous sheet for sealing buried structures. Definitions and characteristics.
- It complies with the requirements of the Technical Building Code (CTE).
- Complies with CE marking requirements.
- ETE 06/0062 "Esterdan Plus FM Bilayer".
- EOTA Guide 006.

## Scope

- The mineral finish gives the sheet UV resistance, which is necessary for visible waterproofing. Therefore, this sheet can be used as a top layer in two-layer membranes with heavy bonded protection in place of the plasticised sheet, in those cases where it is foreseen that a certain time will elapse between the execution of the waterproofing and the protection.
- Waterproofing under tiles on pitched roofs, both for its thickness and its mechanical resistance. In addition, the mineral self-protection makes work on the roof easier and more convenient. In these cases, the sheet, in addition to adhering to the substrate, will be nailed to the substrate.
- Multilayer membrane top sheet for roof waterproofing with mineral self-protection.
- Single-layer membrane for waterproofing bonded self-protected roofs.

## Advantages & Benefits

- Absorbs structural movements well.
- Good performance in nailed systems.
- Helps to increase the durability of the sheet.
- It retains its properties better over time.
- Great dimensional stability.
- High tensile strength and high elongation at break.
- High resistance to tearing.
- High resistance to static and dynamic piercing.
- Rot-proof.
- The membrane, being made of a bitumen mastic modified with plastomers, provides high performance at high and low temperatures, plasticity and resistance to ageing, which leads to greater durability of the sheet and greater safety of the waterproofing membrane.
- Limits deformations and stresses in the waterproofing membrane.
- Very stable in the long term.
- Has good piercing protection from possible mechanical damage, derived from the occasional pedestrian traffic typical of flat roofs.

## Indications and Important Recommendations

- In case of new construction and renovation, possible chemical incompatibilities with other sheets shall be taken into account.
- In case of renovation, chemical incompatibilities with old waterproofing consisting of flexible PVC sheets, 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 (geotextiles, mortar layer, polyethylene film, etc).
- 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.
- On exposed self-protected roofs, occasional water retention that could lead to sediment

accumulation and damage to the waterproofing membrane shall be avoided.

- 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 finished in light colours perform better thermally.
- Self-protected sheets in coloured mineral or ceramic granules may have different colour shades depending on the different production batches.
- Self-protected sheets are exposed sheets, so care must be taken when installing them.
- Sheets made of plastomeric bitumen require more blowtorch input than sheets made of SBS elastomeric bitumen in order to work properly. It is important to take this aspect into consideration when welding the sheets to the substrate, when welding the overlaps of the sheets and when welding the sheets to each other.
- NOTE: For more information on the Danosa systems in which this product is used, please see the document "Waterproofing Solutions".
- There is no chemical incompatibility between the Danosa range of oxyasphalt, SBS elastomeric bitumen and plastomeric bitumen sheets.
- Do not use as a top sheet on green roofs.
- Possible incompatibility between thermal insulation and waterproofing shall be checked.
- 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.

## Maintenance Recommendations

- Maintenance requirements for Danosa Roofing Products The following maintenance checks must be adhered to: - A general examination on the condition of the waterproofing and surrounding roof components. - An inspection of all functional roofing elements including skylights, outlets, upstands, penetrations and any other visible roofing components. - Clean outlets, drains, gutters and remove any debris from the roof. - Periodic removal of mildew, moss, herbs or any other kind of vegetation that has been accumulation on the waterproofing. - Periodic removal of possible sediments accumulated on the deck (silt, sledges, slate granules, etc) by occasional water accumulation. - Periodic removal of debris and small objects that may have accumulated on the roof. - Ensure surrounding structural elements are sound such as eaves, flashings, slate tiles and brickwork. - Ensure that the waterproofing is in good condition and there are no blisters, damage or separation. - Review the condition of the waterproofing (adherence to upstands, condition of overlaps, visual appearance, etc) and repair the defects observed. These operations must be carried out twice a year, preferably at the beginning of spring or autumn and must be increased in case of decks or valleys with zero falls. It is also necessary to perform additional maintenance depending on the type of roof, location and proximity of roofs to areas with trees or in areas with high levels of pollution. More details on the document Maintenance and repair recommendations for flat roofs waterproofed with modified bitumen sheets

## Handling, storage and preservation

- Before moving the pallet, the condition of the shrink-wrap is checked in order to reinforce it if necessary.
- Danosa recommends consulting the safety data sheet for this product, which is permanently available at [www.danosa.com](http://www.danosa.com), or it can be requested in writing from our Technical Department.

- The product must be stored in a dry place protected from rain, sun, heat and low temperatures.
- The product will be stored in an upright position.
- The product will be used on a first-come, first-served basis.
- In all cases, the Occupational Safety and Hygiene standards, as well as the standards of good construction practice, must be taken into account.
- This product should not be installed when the temperature is below -5°C.
- This product is not toxic or flammable.
- 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.
- Pallets shall not be stacked on top of each other.
- For high storage, the racks must have three cross members, or braces under the wooden pallet skids.
- For further information, please contact our Technical Department.
- For handling with a crane, use a protective net as indicated on the pallet label.

## 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**