

ESTERDAN 48 P POL

Tough APP plastomeric 4,8 kg/m² underlay. Torch applied.



ESTERDAN 48 P POL is a waterproofing bituminous sheet with non self-protected surface of 4.8 kg/m². Composed of a reinforced polyester felt reinforcement and covered on both sides with polymer modified bitumen mastic. A polyethylene film is used as anti-adherent material on both sides. Tested according to standard EN test methods.

Presentation

- Length (cm): 800
- Width (cm): 100
- Thickness (mm): 4.1
- Product code: 141172

Technical Data

Concept	Value	Standard
Mass per unit area (nominal) (kg/m ²)	4.8	-
water absorption by total immersion (Vol.%)	1	-
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
Elongation at transverse break (%)	45 ± 15	UNE-EN 12311-1

Concept	Value	Standard
Water vapour resistance factor (μ)	20.000	UNE-EN 1931
Low temperature flexibility ($^{\circ}\text{C}$)	<-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	No pasa	EN 13948
Longitudinal tensile strength (N / 5cm)	700 \pm 200	UNE-EN 12311-1
Transverse tensile strength (N / 5cm)	450 \pm 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	-
Resistencia al pelado (N/mm ²)	>900	-
Joint Strength: Welding Shear	450 \pm 150	UNE-EN 12317-1
Hazardous substances	PND	-

Additional Technical Data

Concept	Value	Standard
water absorption by diffusion (Vol.%)	1	-
Density (kg/m ³)	1171	-
Adhesion of granules (%)	NPD	UNE-EN 12039
Nominal minimum thickness	4.1	UNE-EN 1849-1
Dimensional stability at elevated temperatures (longitudinal) (%)	<0.6	UNE-EN 1107-1
Dimensional stability at high temperatures (transversal) (%)	<0.6	UNE-EN 1107-1
Creep resistance at high temperatures ($^{\circ}\text{C}$)	>130	UN-EN 1110
Durabilidad UV; calor y agua: Flexibilidad a baja temperatura ($^{\circ}\text{C}$)	NPD	-
Durabilidad UV; calor y agua: Fluencia a alta temperatura ($^{\circ}\text{C}$)	NPD	-

Environmental Information

Concept	Value	Standard
Volatile organic compounds (COV's) ($\mu\text{g}/\text{m}^3$)	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".

Scope

- Tanking membrane.
- Underlay for self-protected double-layer bonded membranes.
- Bottom or top sheet in two-ply membranes with heavy bonded protection).
- Bottom or top sheet in two-ply membranes with heavy unbonded or floating protection.
- Bonded single-layer membrane for the waterproofing of roofs with heavy protection.
- Bonded single-layer membrane for waterproofing slabs and foundation slabs with hydrostatic pressure.
- Bonded single-layer membrane for waterproofing wet areas (bathrooms, toilets, changing rooms, etc.) in all types of buildings.
- Unbonded or floating single-layer membrane for the waterproofing of roofs with heavy protection.
- It can replace the Esterdan 40 P POL sheet in all systems where this sheet is used, especially when the durability of the waterproofing membrane is to be improved and the installation of the sheet is to be facilitated.

Advantages & Benefits

- High movement capability.
- Good performance in nailed systems.
- Helps to increase the durability of the sheet.
- It retains its properties better over time.
- It has a nominal mass of $4.8 \text{ kg}/\text{m}^2$, which is higher than the $4.0 \text{ kg}/\text{m}^2$ of LBM-40-FP). The higher mass of plastomeric bitumen increases the durability of the waterproofing and makes it easier to lay the sheet.
- A membrane for instances where high waterproofing performance is required.
- Suitable for zero fall roofs (see related certificates).
- High tensile strength and high elongation at break.
- High resistance to tearing.
- High resistance to static and dynamic piercing.
- Rot-proof.

- The membrane, composed of a bitumen mastic modified with plastomers, provides great 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.
- Very stable in the long term.
- Has good piercing protection from possible mechanical damage, derived from the occasional pedestrian traffic typical of flat roofs.

Instruction for Use

Preparation of the substrate: The surface of the base substrate must be resistant, uniform, smooth, clean, dry and free of foreign bodies. In the case of thermal insulation, the boards shall be laid in a joint pattern and without gaps of more than 0.5 cm between boards.

- Bonded single-ply membrane for waterproofing slabs and foundation slabs with hydrostatic pressure and bonded single-ply membrane for waterproofing wet areas (bathrooms, toilets, changing rooms, etc...) in all types of buildings. The adhesion of the membrane to the substrate is carried out with a blowtorch. In the case of mortar or concrete substrates, a bituminous primer (CURIDAN, IMPRIDAN100, MAXDAN or MAXDAN CAUCHO) must be applied beforehand. The overlaps must be welded, and shall be 8 cm in both longitudinal and transversal directions.
- Adhered system single-ply membrane, adhered system double-ply membrane bottom sheet with heavy-duty protection and self-protected double-ply membrane bottom sheet. The adhesion of the membrane to the substrate is carried out with a blowtorch. In the case of mortar or concrete substrates, a bituminous primer (CURIDAN, IMPRIDAN100, MAXDAN or MAXDAN RUBBER) must be applied beforehand. If the substrate is a weldable thermal insulation board, i.e. finished in asphalt (Rocdán A or Rocdán PIR VA), the primer is not necessary. The overlaps shall be welded and shall be 8 cm in both longitudinal and transverse directions. In the case of single ply membranes with heavy duty protection with slope < 1%, the longitudinal and transversal overlap shall be 12 cm.
- Top sheet of two-ply waterproofing membranes with heavy protection. The sheet is laid in the same direction as the bottom sheet, shifting the overlap line 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 shall be 8 cm in both longitudinal and transverse directions.
- Single-ply unbonded or floating system membrane and bottom sheet two-ply unbonded or floating system membrane with heavy protection. In this case, the membrane is only welded to the substrate at the singular points (parapets, expansion joints, drains, etc.), where a bituminous primer (CURIDAN, IMPRIDAN100, MAXDAN or MAXDAN RUBBER) has been previously applied. Non-adherence to the substrate must be guaranteed and a separating layer (DANOFELT PY 150 or Velo 100) may be necessary between the substrate and the waterproofing membrane. The overlaps shall be welded and shall be 8 cm in both longitudinal and transverse directions. In the case of single-ply membranes with heavy duty protection with slope < 1%, the longitudinal and transverse overlap shall be 12 cm.

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 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.
- 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.

- 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.
- There is no chemical incompatibility between the Danosa range of SBS elastomeric bitumen and APP plastomeric bitumen membranes.
- Not suitable as cap sheet on green roofs; use GARDEN variant.
- 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'

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.
- The product will be used on a first-come, first-served basis.
- This product is not toxic or flammable.
- Waterproofing work should not be carried out when the ambient temperature is lower than +5°C for hot air welding.
- 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 handling with a crane, use a protective net as indicated on the pallet label.
- Danosa recommends consulting the safety data sheet for this product, which is permanently available at danosa.com, Knowledge 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.

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**

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