

## **POLYDAN RADON 180-48 P ELAST.**

Waterproofing sheet of SBS modified bitumen with non-protected surface finished with polyethylene film.



BBA 10/4787 (1)

POLYDAN RADON 180-48 P ELAST is a waterproofing bituminous sheet with non self-protected surface of 4.8 kg/m<sup>2</sup>. Composed of a non-woven polyester felt reinforcement and covered on both sides with SBS 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): 4.0
- Logistic class: (C) Products usually in stock, maximum availability in less than 7 days
- Product code: 141211

### **Technical Data**

<b>Concept</b>	<b>Value</b>	<b>Standard</b>
External fire behaviour	NPD	UNE-EN 1187
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	-
Humidity resistance factor	20.000	UNE-EN 1931
Low temperature flexibility (°C)	<-15	UNE-EN 1109

Concept	Value	Standard
Mass per unit area (nominal) (kg/m <sup>2</sup> )	4.8	-
Reaction to fire	E	UNE-EN 11925-2; UNE-EN 13501-1
Resistance to static loading (kg)	>20	UNE-EN 12730
Resistance to root penetration	No pasa	UNE-EN 13948
Longitudinal tensile strength (N / 5cm)	900 ± 250	-
Transverse tensile strength (N / 5cm)	650 ± 250	-
Longitudinal resistance to tearing (nail shank) (N)	NPD	-
Transversal resistance to tearing (nail shank) (N)	NPD	-
Hazardous substances	PND	-

### Additional Technical Data

Concept	Value	Standard
Adhesion of granules (%)	NPD	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)	>100	UN-EN 1110

### Environmental Information

Concept	Value	Standard
Radon diffusion coefficient (m <sup>2</sup> / s)	2.4, Exp -12	ISO/DTS 11665-13
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.
- It complies with the requirements of the Technical Building Code (CTE).
- Complies with CE marking requirements.

## Scope

- Underlay in multi-layer systems with mineral self-protection for waterproofing of railway decks.

## 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.
- It has a heavy polyester felt reinforcement (heavier than LBM-(SBS)-40-FP).
- It has a nominal mass of 4.8 kg/m<sup>2</sup>, which is higher than the 4.0 kg/m<sup>2</sup> of LBM-40-FP). The higher mass of plastomeric bitumen increases the durability of the waterproofing and makes it easier to lay the sheet.
- The higher grammage of the polyester reinforcement gives the sheet higher mechanical performance in tensile, static and dynamic piercing and tearing.
- It is a sheet for cases where high waterproofing performance is required.
- High tensile strength and high elongation at break.
- High resistance to tearing.
- High resistance to static and dynamic piercing.
- Rot-proof.
- The sheet, being made of a bitumen mastic modified with SBS-type elastomeric polymers, substantially improves other bituminous mastics, providing much better performance in terms of reaction at high and low temperatures, elasticity 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 shall be resistant, uniform, smooth, clean, dry and free of foreign bodies. In the case of thermal insulation, the boards shall be laid flush with each other and without gaps of more than 0.5 cm between boards.

- Single-ply adhered system membrane, double-ply adhered system membrane bottom sheet with heavy-duty protection and double-ply self-protected 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 (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 are to be welded, and shall be 8 cm in both longitudinal and transverse directions.
- Top sheet of two-layer 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 singular points (parapets, expansion joints, drains, etc.), where a bituminous primer (Curidán, Impridán 100, Maxdán or Maxdán Caucho) 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 must be welded, and shall be 8 cm in both longitudinal and transversal directions.

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

## Warning

- Do not apply on icy or wet surfaces.

## 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](http://www.danosa.com)** E-mail: **[info@danosa.com](mailto:info@danosa.com)** Telephone: **+34 949 88 82 10**