

Evergarden PRV



אֶבֶר גַּרְדֵּן

In recent years, the need has arisen to recover vital spaces within towns and cities and therefore the need to create artificial green areas. A 'green' or 'living' roof is essentially the growing of plants on our rooftops cooling and retaining heat in buildings according to different climates. Intensive, Extensive and Bio- diverse or brown roof create natural growing conditions across the roof from a thin growing layer of sedums and mosses to plants, trees, shrubs, water features and even golf courses. The vegetation has numerous advantages such insulation, habitat for wild life, rainwater control, noise control and many more.

THE COMPOUND



EVERGARDEN PRV is an elastomeric polymer-bitumen membrane with specific chemical additives that make it resistant to roots. The compound is distilled bitumen modified with synthetic polymers APP (atactic polypropylene) which give excellent thermal stability, weathering and aging. The cold flexibility is -10 ° C.

THE SUPPORT

EVERGARDEN PRV Evergarden PRV provides an barrier in stabilised polyester nonwoven fabric with longitudinal reinforcing threads which provide excellent strength and dimensional stability.

THE FINISHING

EVERGARDEN PRV is produced in plain surface and protected by a nonstick mineral dusting on the upper face and a hot-melt film in polyethylene applied on the lower face.



FIELDS OF APPLICATION

The polymer bitumen membranes Evergarden PRV are specifically identified as suitable for the waterproofing of structures where it is expected the presence of vegetative finishes, such as green roofs, walls against, underground structures, etc. The waterproofing compound is suitably mixed with special chemical additives (B2 Preventol ® Bayer) that give a high resistance to the penetration of the roots. In addition, aggressive chemicals such as fertilizers and herbicides action "anti-root" option will apply the product without causing any prejudice about the life and health of the plantings and green carpets.

The antiroot additives are not leached by rainwater and resist the action of the flame during application. The product provides permanent protection.

Due to their characteristics, the membranes in the Evergarden PRV range are suitable for the waterproofing a wide range of civil and industrial works where there is the need to prevent the action of the roots of the vegetation that can cause a detriment to integrity of the waterproofing layer in roof gardens, car parks, underground structures, retaining walls, foundations, planters.



Top layer walls and foundations

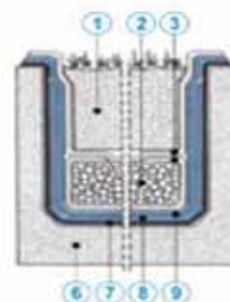


Layer by Layer retaining antiradice



Sealing layer antiroot

TYPICAL DETAILS OF PLANTING A CONTAINER



STORAGE

- Keep the rolls in a vertical position, protecting them from direct sunlight and frost at a temperature between 0 °C and +40 °C.
- When double stacking pallets, place a board between pallets.
- The pallets provided at the time of delivery are suitable for a normal handling loading and unloading. Where lifting higher additional strapping and care may be necessary.

APPLICATION

- Prior to application it is necessary to stabilize the product at +5 ° C which is also the minimum application temperature. Please note that the application should be discontinued in the event of adverse weather conditions that could undermine membrane adhesion to the substrate as excessive moisture or rain.
- Thoroughly clean the substrate, removing the bumps and possible scaling. The surface must be smooth, dry and clean.
- Prepare the substrate with bituminous primer **VIABIT** or **VIABIT PLUS** to promote adhesion of the membrane and the removal of any dust.
- Align the membrane rolls which have to include an overlap of at least 10cm on the longitudinal seam and at least 15cm on the cross junction.
- Apply the membrane with a propane gas torch.
- Ensure overlaps are fully sealed.

The design requirements for green roofs require some differences when compared to that of continuous roofing standard. The waterproofing is normally performed in two layers, in order to further ensure a watertight seal in case of any local welding defects.

The overlaps on vertical joints of the waterproofing layer should be a minimum of at least 15 cm, particularly with the Evergarden. The vertical joints must be adequately protected against potential and possible accelerated aging and mechanical stress, for example due to maintenance obligations.

Total and complete adhesion between the layers of membrane is required to prevent horizontal movement of water between the two layers. For slopes exceeding 5 degrees membranes should be mechanically fixed at the top edge.

WARNINGS: the bitumen-polymeric compound admixed with Preventol B2[®] is resistant to the roots of lupine in accordance with the test method DIN 4062 (UNI 8202 p24). Passing the test EN 13948 states that the membranes of the family Evergarden PRV are eligible for the CE marking for the intended use as a “waterproof membrane for green roofs” and is a method of evaluation technique of absolute importance at European level. This, however, does not relieve the user of the product to take precautions as a function of specific plantings that are not covered by the tests mentioned above. That, however, specifying that the test results are not extensible to plants with strong and fast development of roots to rhizome with high incidence and rapid mechanical, such as some species of bamboo, reed or of Chinese zebra grass, for which it is necessary to provide additional precautionary measures isolating them from the general context of roofing or waterproofing systems, structured green roof.

1. Soil or growing medium.
2. Drainage layer in *argilla espansa, pezzatura 16÷32, spessore 10÷15 cm*
3. Nonwoven polyester with acting as:
4. – Upper filtering layer
5. – Separation layer below.
6. Container.
7. Bitumen primer **VIABIT PLUS** at the rate of 300 to 350 gr/sqm
8. **EVERPOL POLY 16SB 4** mm applied to the support
9. **EVERGARDEN** antirroot applied to the underlying membrane

CARATTERISTICHE TECNICHE

Description: Elastoplastomeric polymer bitumen membrane BPP, compound in distilled bitumen modified with high molecular weight polymer, reinforced with nonwoven spunbond polyester fabric, glass stabilized. The bituminous compound is added with a specific and permanent anti-root additive (Preventol B2® by Bayer).

Field of Application: top layer, root-resistant, in a multy-layer waterproofing system-below grade, root-resistant, in foundations and walls.

Method of Application: torched-on. **Applicable Directive:** EN 13707 - EN 13969.

Dangerous Substances: the product does not contain dangerous substances (D.L. 152/06).

Characteristic	EN DRC	UNIT	VALUE			TOL
Visible Defects	EN 1850-1	–	pass			–
Thickness	EN 1849-1	mm	4.0			–10%
Areic Mass	EN 1849-1	kg/m ²				npd
Width and Length	EN 1848-1	m	1.0	10.0		–1%
Straightness	EN 1848-1	mm	max 20			pass
Max Tensile Force (L/T)	EN 12311-1	N/5cm	500	350		–20%
Elongation (L/T)	EN 12311-1	%	40	40		–15 ass
Resistance to Tearing (L/T)	EN 12310-1	N/5cm	140	160		pass
Resistance to Static Loading	EN 12730-A	kg	15			pass
Resistance to Impact	EN 12691	mm	700			pass
Joint Strenght (L/T)	EN 12317-1	N/5cm				npd
Peel Resistance of Joint	EN 12316-1	N/5cm				npd
Pliability (Cold Flexibility)	EN 1109	°C	–10			pass
Pliability (Aged)	EN 1296	°C				npd
Uv Ageing (Visible Defects)	EN 1297	–				npd
Water Permeability	EN 1928	kPa	60			pass
Water Vapour Permeability	EN 1931	μ × 1.000	20 (default)			npd
Water Vapour Permeability (Aged)	EN 1296	μ × 1.000				npd
Form Stability (New/Aged)	EN 1110	°C	120			pass
Dimensional Stability (L/T)	EN 1107-1	%	–0,25	+0,15		pass
Root Resistance	Group MBP	% add.vo	≥ 0,5			npd
External Fire Performance	EN 13501-5	class	F (roof)			npd
Reaction to Fire	EN 13501-1	class	F			npd
Adhesion of Granules (Mineral Version)	EN 12039	%				npd
Standard	Thickness	mm.	2	3	4	5
	Rolls × pallet	n.	–	–	23	20
Mineral	Areic mass	kg/m ²	3,5	4,0	4,5	5,0
	Rolls × pallet	n.	–	–	–	–

Upper finishing: anti-adherent dotted talc – slate chips/granules (mineral version)

Lower finishing: thermo-fusible polyethylene film

Packaging: shrinkable polyethylene film, on pallet

Additional info: “polymer bitumen membrane info sheet”, current release

Technical data declared may vary without previous notice

