

PermaSEAL^{PRO} 60P Green Roof

Drainage & Storage Membrane



PermaSEAL[®] PRO 60P Green Roof is a high quality HDPE drainage and water storage membrane suitable for use in intensive soft landscaping Green Roof applications, along with various hard landscaping designs.

Made from 100% recycled HDPE, the 60mm profile has a large water storage capacity of approx. 20 l/m². It's specifically designed for intensive Green Roofs with large sized shrubs and trees. It also allows for installation into Green Roof areas designed to be without irrigation for extended periods or areas that are heavily planted, optimising water supply. With a high pressure resistance of approx. 200 kN/m², **PermaSEAL[®] PRO 60P** Green Roof is the ideal choice for large intensive, commercial projects with elaborate designs and trafficked areas such as, children's playgrounds and recreational spaces.

The dimpled membrane has a very high drainage capacity of $i = 0.10$; approx. 3.86 l/s m, allowing for large drainage lengths and/or low roof slopes. The plant substrate can be applied directly onto the dimpled membrane after laying a separate geotextile membrane. Thanks to the perforations, the water-storing drainage element is permeable and suitable for inverted roofs; preventing a film of water forming on the inverted roof insulation. In walkable areas without vegetation, geotextile is not required. The base layer and bedding material are applied directly onto the dimpled membrane and into the storage cups. Pavement or slab covering can then be laid on top of it.

PermaSEAL[®] PRO 60P is guaranteed against deterioration for 30 years and has a life expectancy equal to the design life of the structure (DIN 9001:2000). It is an inert product and is highly resistant to water, alkalis, saline solutions, organic acids, bacteria, fungi and other small organisms and is not affected by minerals.

PERMASEAL[®] PRO 60P GREEN ROOF

PRODUCT TECHNICAL DETAILS

Membrane	HDPE approx 2500g/m ²
Composition	Recycled HDPE
Stud height	Approx 40mm
Total weight	Approx 2200g/m ²
Number of studs	130/m ²
Compressive strength	Approx 200kN/m ²
Colour	Black
Water drainage capacity $i = 1.00$	Approx 4.48 l/s m
Water drainage capacity $i = 0.10$	Approx 3.86 l/s m
Water storage capacity	Approx. 20 l/m ²
Slab length	2m
Slab width	1m
Temperature resistance	-30°C to +80°C
Chemical properties	Chemical resistant
Physical properties	Safe for drinking water
Fire resistance	Class E

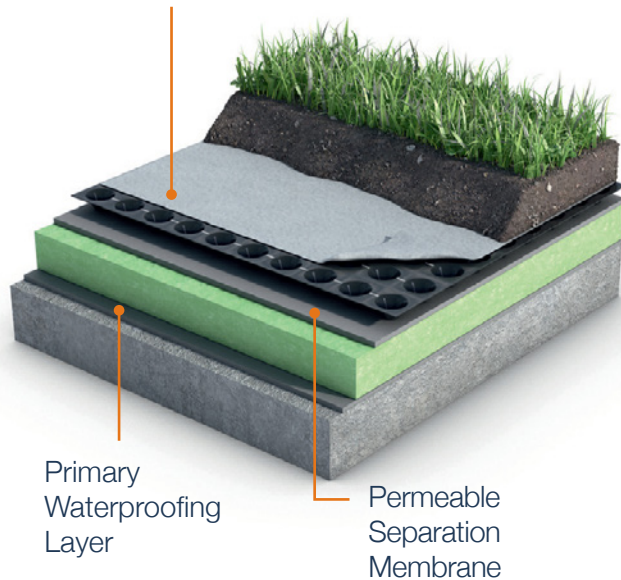
FEATURES

- **Large water storage capacity** of 20 l/m²
- **High compression** strength 200kN/m² = 20t/m²
- Suitable for **intensive Green Roof** and **walkable areas**
- Extremely **tough** and **durable**
- **Easy to install**
- **Manageable** slab size/weight for one person
- Can be used on **inverted warm roofs** or **cold roofs**

ACCREDITATIONS

PermaSEAL[®] PRO 60P Green Roof Drainage and Storage membrane is tested and CE marked to the relevant standard.

PermaSEAL® PRO 60P Green Roof Membrane



INSTALLATION

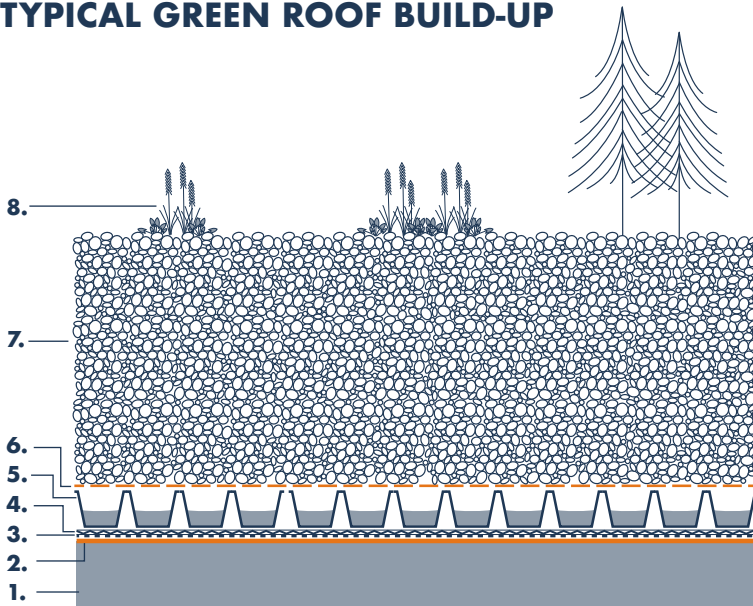
The application surface should have a gradient of at least 2%. Once the horizontal waterproofing, root barrier and any other required build-up is in place, the PermaSEAL® PRO 60P slabs are laid in place.

There is no need for overlaps simply butt joint edges together. Overlapping can be achieved if necessary.

The dimpled sheet can be cut to the required length with a knife, being careful not to damage the waterproofing or any other layers.

Once installed and depending on the finish, the PermaSEAL® PRO Geotextile 120 can be applied over the surface ready to receive the planting substrate.

TYPICAL GREEN ROOF BUILD-UP



KEY

1. Deck
2. Waterproofing layer
3. PermaSEAL® PRO Root Barrier
4. PermaSEAL® PRO Protection Fleece 500
5. PermaSEAL® PRO 60P Membrane
6. PermaSEAL® PRO Geotextile 120
7. Intensive Substrate
8. Shrubs & Trees

FINISHING

PermaSEAL® PRO 60P Green Roof is designed to receive a number of build-ups including intensive Green Roof or hard landscaping designs.

INTENSIVE GREEN ROOF

- Roofs with large vegetation e.g. bushes, trees
- Thick substrate layer, 15-60 cm thick
- High weight up to 500 kg/m²
- Must be maintained like gardens
- Additional water necessary

DRIVABLE ROOF

A sub base course and a bedding course will be installed between PermaSEAL® PRO 60P Green Roof and the drivable pavement.

WALKABLE ROOF (WITH PAVEMENT OR FLAGSTONES)

- A bedding course of sand, gravel or chippings will be installed between PermaSEAL® PRO 60P Green Roof and the pavement.

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