

# PermaSEAL 60 P Green Roof Drainage & Storage Membrane



## Description

PermaSEAL 60 P Green Roof is an extremely high quality, high performance HDPE drainage and storage membrane for intensive green roofs.

The 60mm profile has a water storage capacity of approx. 20 l/m<sup>2</sup>. This allows for installation into green roof areas designed to be without irrigation for extended periods or areas that are heavily planted, optimising water supply to the vegetation. The pressure resistance of approx. 200 kN/m<sup>2</sup> boasts a high level of security, corresponding to a compressive strength of approx. 20 tonnes per m<sup>2</sup>.

The dimpled membrane has an unusually high drainage capacity of  $i = 0.10$ ; approx. 3.86 l/s-m, allowing for very large drainage lengths and/or very low roof slopes.

The plant substrate can be applied directly to the dimpled membrane after laying a separate geotextile membrane. Thanks to the perforations, the water-storing drainage element is permeable and is also suitable for inverted roofs; this prevents a film of water from forming on the inverted roof insulation. In walkable areas without vegetation, geotextile is not required. The base layer and the bedding material are applied directly onto the dimpled membrane without changing the material. Pavement or slab covering can then be laid on top of it.

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## Features

- Large water storage capacity of 20 litres /m<sup>2</sup>
- High compression strength 200kN/m<sup>2</sup> = 20t/m<sup>2</sup>
- 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

## Technical Details

<i>PermaSEAL 60 P</i>	<b>Technical Details</b>
<i>Membrane</i>	HDPE approx. 2500g/m <sup>2</sup>
<i>Composition</i>	Virgin Recycled HDPE Mix
<i>Stud height</i>	Approx. 60mm
<i>Total weight</i>	Approx. 2500g/m <sup>2</sup>
<i>Number of studs</i>	130/m <sup>2</sup>
<i>Compressive strength</i>	Approx. 200kN/m <sup>2</sup>
<i>Colour</i>	Black
<i>Water drainage capacity i = 1.00</i>	Approx. 4.48 l/s m
<i>Water drainage capacity i = 0.10</i>	Approx. 3.86 l/s m
<i>Water storage capacity</i>	Approx. 20 l/m <sup>2</sup>
<i>Slab length</i>	2m
<i>Slab width</i>	1m
<i>Temperature resistance</i>	-30 ° C to +80 ° C
<i>Chemical properties</i>	Chemical resistant
<i>Physical properties</i>	Safe for drinking water
<i>Fire resistance</i>	Class E.

## Accreditations

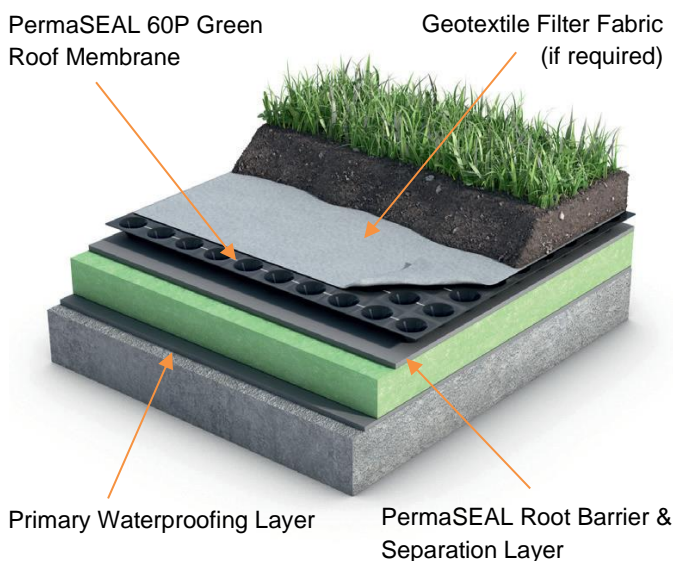
PermaSEAL 60P Green Roof Drainage and Storage membrane is tested and CE marked to the relevant standard.

## Installation

The application surface should have a gradient of at least 2%. Once the horizontal waterproofing is in place, PermaSEAL Root Barrier should be applied over the surface before PermaSEAL 60P slabs are laid in place. There is no need for overlaps simply butt joint edges together. Overlapping can be achieved if necessary.

With the vertical edges of the surface, the drainage membrane should be raised at least 150mm or to the upper edge of the finished substrate layer.

Once installed and depending on the finish, the geotextile can be applied over the surface ready to receive the planting substrate.



## Walkable Roof (with pavement or flagstones)

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

## Storage

Store flat in dry conditions at temperatures between 5°C and 25°C. Do not expose to freezing conditions or direct sunlight. Protect from UV.

## Health and Safety

Please use the product only in accordance with the information given in this datasheet and the installation guide. There is no legal requirement for a Safety Data Sheet for this product.

## Further Information

PermaSEAL 60P Green Roof is suitable for various types of installation and it is imperative that the membrane is specified in the correct detail as part of a wider waterproofing and drainage system. This product is not designed to be a waterproofing membrane, it is designed to be the protection and drainage layer over the primary waterproofing. Please contact our technical department if at all unsure as to its suitability.

## Finishing

PermaSEAL 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/m<sup>2</sup>
- Must be maintained like gardens
- Additional water necessary

### Driveable Roof

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