



## PRODUCT DETAILS

Product name	<b>Pro-Living® Substrate - Biodiverse</b>
Product type	Green roof component

## PRODUCT DESCRIPTION

**Pro-Living® Substrate - Biodiverse** is a clean drainage and growth media designed for use in living roof applications. It is supplied in 1.25m<sup>3</sup> bulk bags certified for safe lifting, on recycled 4-way pallets. A safety certificate for the bulk bags can be issued to client, contractor, or site.

## APPLICATION

**Pro-Living® Substrate - Biodiverse** is designed for semi-intensive green roofs, it is installed at varied depths across the roof during installation to support a range of plant types and sizes to increase biodiversity and attract wildlife.

## INSTALLATION

**Pro-Living® Substrate - Biodiverse** can be laid to depths varying from **120 - 180mm**.

The depth of substrate is determined by the planting scheme and the weight loading capability of the roof which must be assessed by a qualified structural engineer.

## TECHNICAL INFORMATION

Characteristic	Value	Unit
Bulk density oven dried	0.99	g/cm <sup>3</sup>
Bulk density at 10% VMC	1.08	g/cm <sup>3</sup>
Bulk density at field capacity	1.4	g/cm <sup>3</sup>
Field capacity	40	% v/v
Particle density	1.38	g/cm <sup>3</sup>
Total porosity	71.9	%
Porosity at field capacity	39.5	%
Effective porosity	32.3	%
Saturated hydraulic conductivity	151	mm/min
Nitrogen	12.3	mg/L
Phosphate	> 165	mg/L
Potassium	> 241	mg/L
Organic matter	3.7	%

Characteristic	Value	Unit
pH	8.5	-
EC	2.8	mS/cm

Particle Size Distribution		
Particle	Size (mm)	Quantity (%)
Stones	> 8	1.7
Coarse gravel	8 - 4	16
Fine gravel	4 - 2	2.6
Very coarse sand	2 - 1	7.4
Coarse sand	1.0 - 0.5	21
Medium sand	0.5 - 0.25	33.9
Fine sand	0.250 - 0.125	13.2
Very fine sand	0.125 - 0.050	0.6
Silt	0.050 - 0.002	2.3
Clay	< 0.002	1.4

## SIZE, FINISH AND COLOUR

Product Code	Weight (kg)	Max Water Capacity (volume - %)
GRSUBD125	1250	40

## SHELF LIFE AND HANDLING

Always use relevant safe manual handling techniques relevant to a products size and weight.

## PACKAGING

Supplied in bags and shrink wrapped on pallets. The product is bagged specifically for projects to ensure material is kept dry and free from growth or detritus.

## LIMITATIONS OF USE

For professional use only.

## GUARANTEES

Defects arising from lack of maintenance or abnormal use may fall outside of the cover of the Proteus Waterproofing guarantee.

## DISPOSAL

Disposal of **Pro-Living® Substrate - Biodiverse** should be done in a manner that is compliant with UK regulations and best practices. This includes ensuring that the material is properly classified and described, that it is not mixed with hazardous waste, and that it is disposed of in a manner that is environmentally responsible.

## MAINTENANCE

### Biodiverse roof 80 - 150mm very-low to low nutrition substrate

- **Irrigation:** Typically, not required
- **Fertilisation:** Generally not required, particularly where indigenous species are being encouraged to replicate native habitats. Whilst a low vegetative density is common, zero vegetation is generally undesirable
- **Plant management:** A maintenance programme should be drawn up to follow the intended biodiversity objectives
- **General:** Drainage outlets (with inspection chambers) and gravel/shingle perimeters should be inspected twice yearly and cleared of any living or dead vegetation.

Maintenance should take account of the intended wildlife support, in addition to standard green roof maintenance procedures. Care should be taken not to remove all vegetation after flowering as many insects over-winter in hollow plant stems. [Green Roof Organisation](#) guidance should be followed, unless stated otherwise.

## GUIDELINES AND STANDARDS

It is the responsibility of the Contractor to thoroughly familiarise themselves with all relevant Codes of Practice and Building Regulations to the works or referred in the specification.

Proteus Waterproofing take no responsibility for misinterpretation or lack of knowledge for third parties.

The works shall be carried out in accordance with the requirements of:

- **BS 6229** Flat roofs with continuously supported flexible waterproof coverings - Code of practice
- **BS 8217** Reinforced bitumen membranes for roofing - Code of practice
- **BS 8000-0** Workmanship on construction sites - Introduction and general principles
- **BS 8000-4** Workmanship on building sites - Code of practice for waterproofing
- **LRWA** [Design Guide for Specifiers](#)
- **S2T** [Safe to Torch](#)
- **GRO** [Code of Best Practice](#)