

**GREEN ROOFS DIRECT**

# **Lightweight System Specification**



# Lightweight System Build Up Specification

**Consisting of:** Protective Fleece, Drainage Layer, Growing Medium  
and Pre Grown Sedum Blanket

## Drainage Layer

### Uses:

Drainage Layer is used as a drainage, protection, filter layer for extensive green roof systems on flat roofs.

### Characteristics / Advantages

- 4 in 1 product (drainage, protection, filter and root expansion layer)
- Light and easy to cut
- Suitable for low pitch roofs
- High porosity and very high water transmissibility
- Drainage Layer does not rot
- Compressive strength
- Recyclable

### Tests Approvals / Standards

Quality management system EN ISO 9001/14001  
Reaction to fire according to EN 13501-1, class E

### Product Data:

Appearance Surface: structured

Colour Drainage layer: coloured Filter fleece: light grey Packaging,

Packing unit: 40 pieces per pallet (90 m<sup>2</sup>)

Storage Conditions Drainage Layer shall be stored at dry conditions.

Shelf-Life Drainage Layer does not expire during correct storage.

# Lightweight System Drain Technical Data :

## Geocomposite Properties

<b>Thickness at 2kPa (mm)</b>	12mm	EN ISO 9863-1
<b>Mass per unit area (g/m²)</b>	1 040 approx	EN ISO 9864
<b>Tensile strength MD / CMD (kN/m)</b>	24 / 24 -10%	EN ISO 10319
<b>Elongation at peak MD / CMD (%)</b>	45 / 45 nominal	EN ISO 10319
<b>CBR puncture resistance (N)</b>	3 900 -20%	EN ISO 12236
<b>Perpendicular Water Inflow Dimple Side Flat side</b>		
<b>Water flow at 50mm head (l/m²·s) 103 2.5 ±30% EN ISO 11058</b>	103 2.5 ±30%	EN ISO 11058
<b>At 2kPa permeability (coefficient) (m/s) 2.5 X 10-3 ±30% EN ISO 11058</b>	2.5 X 10-3 ±30%	EN ISO 11058
<b>Breakthrough head (mm) 0 nominal</b>		
<b>In-plane water flow MD and CMD HG = 1.0 HG = 0.1 Hydraulic gradient</b>		
<b>at 20kPa confining pressure (l/m·s)</b>	2.40 ±0.40 0.67 ±0.13	EN ISO 12958
<b>at 100kPa confining pressure (l/m·s)</b>	1.95 ±0.33 0.53 ±0.11	EN ISO 12958
<b>at 100kPa confining pressure (l/m·s)</b>	1.45 ±0.24 0.37 ±0.07	EN ISO 12958

with soft foam contact surfaces to simulate textile intrusion

**Resistance to weathering to be covered in 28 days** EN 12224

**Resistance to chemicals EN 14030** Excellent EN 14030

**Design life 120 years (manufacturer's declaration)**

## Geotextile Properties

**Thickness at 2kPa (mm) 1.2 ±20% EN ISO 9863-1** 1.2 ±20% EN ISO 9863-1

**CBR puncture resistance (N) 1 600 -20%  
EN ISO 12236** 9.5 / 9.5 -13% EN ISO 10319

**Pore size 090 (µm) 120 ±30% EN ISO 12956** 120 ±30% EN ISO 12956

**Tensile strength MD/CMD (kN/m) 9.5 / 9.5 -13%  
EN ISO 10319** 1 600 -20% EN ISO 12236

**Dynamic perforation cone drop (mm) 32 +20%  
EN ISO 13433** 32 +20% EN ISO 13433

**Type and material Non-woven needle-punched  
and heat-treated**

## Product Dimensions

**Standard roll dimensions 1.1 m x 50 m**

## Growing Medium:

**Install** 20mm multi-layer extensive roof substrate composed of mineral bulk mixture with a proportion of mineral and organic matter.

**Total pore volume** > 60-70 Vol %

**Max water capacity** ≥ 35% Vol

### Key data

Dry weight approx. ≤ .75 g/cm<sup>3</sup>

Water saturated ≤ 1.4g/cm<sup>3</sup>

**Organic content** ≥65 g/L

**pH value** 5.8-7.9

**Water permeability** ≥ 0.6 mm/min

**Compression factor** 1,2

## Vegetation Layer:

Please see data sheet for information

### Ecology, Health and Safety Information

The product does not fall within the EC-regulation of hazardous goods. As a result, a material safety data sheet following EC-Guideline 91/155 EWG is not needed to bring the product to the market, transport or use it. The product does not damage the environment when used as specified.



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## Sedum Blanket Datasheet:

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<b>Carrier</b>	Predominately rottable Cocomat with geo textile weave
<b>Substate</b>	Locally produced mix containing at least 25% recycled green waste
<b>Vegetation composition</b>	Sedum Acre Aureum, Sedum Album Coral Carpet, Sedum Album mini, Sedum Album Athoum, Sedum Hispanicum, Sedum Summer Glory, Sedum Reflexum, Sedum Weihenstephaner Gold, Sedum Voodoo
<b>Vegetation coverage</b>	Vegetation coverage
<b>Thickness</b>	2.5cm -4.5cm
<b>Water saturation weight</b>	18-22 kg /m <sup>2</sup>
<b>Standard Size</b>	1 m x 1.5 m

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