Green Roof Growing Media

Identification

Kemper System's growing mediums are derived completely from UK sourced recycled materials. The brick, tile and green garden waste is sanitised, matured and graded to meet specific requirements to provide optimum conditions for plant propagation. Most planting designs can be satisfied from one the four Kemper System Growing Mediums.

Uses and Benefits

- Well-graded, friable and free flowing
- Clean and disease free/disease suppressant
- High humus and bound nutrients
- Low water-soluble Nitrogen and & Phosphorous
- Peat-free
- Produced from 100% recycled materials (PAS100)
- UK-sourced ingredients
- Cost effective

TECHNICAL DATA SHEET

Media Types and Use

All mixes are based on specially matured and graded green compost to provide optimal stability and minimal leaching of organic matter and nutrients, plus carefully selected and graded clay aggregate: recycled from clean brick and tile.

- **Sedum Roof Medium** is based on 5–14 mm grade brick/tile and 10–25 mm green compost
- **Meadow Roof Medium** is based on 2–5mm grade brick/tile and 0–10 mm green compost
- **Lawn Roof Medium** is based on 2–5 mm brick/tile and 0–10 mm green compost and sterilized soil
- **Sedum Seed Medium** is based on 2-5 mm brick/tile, 0–8 mm compost, fine bark and sterilized soil, and is designed for raising sedum and similar subjects from seed or cuttings.

For best results, all media should be irrigated to run-off before sowing / immediately after planting. All provide an air-filled porosity greater than 20% v/v – as advised by the Green Roof Centre, Sheffield and therefore good drainage, robust hardy growth and strong root action.

Delivery

- Multi-trip/pourable, palletised / wrapped IBC's or palletised/wrapped 25 litre bags.
- Bulk delivery (tipper or walking floor trucks) and application by blower truck can be arranged for large projects.

Technical Data

Properties	Unit	Typical Values - Medium			
		Sedum Roof	Meadow Roof	Lawn Roof	Sedum Seed
Laboratory bulk density	g/l	800	750	740	710
Organic matter	%DM	3.1	3.5	11	14
(from loss at 450°C)	g/litre	1.8	25	61	79
pH [1] (1:5 aqueous extract)		8.3	7.7	7.5	7.1
Electrical conductivity	µS/cm	1100	1500	1400	1500
(1:5 aqueous extract)	mS/m	110	150	140	150
(1:5 aqueous extract)	mg CO2/g OM[2]	1.3	1.3	1.3	1.3

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Technical Data Continued...

Nutrients - Water Extractable[3]	Unit	Typical Values - Medium			
		Sedum Roof	Meadow Roof	Lawn Roof	Sedum Seed
Ammoniacal nitrogen (NH_4-N) as N	mg/l	10	13	15	25
Nitric nitrogen (NO_3-N) as N	mg/l	2	2	4	15
NH_4+NO_3-N as N	mg/l	12	15	19	40

Nutrients - CAT Extractable[3,4]	Unit	Typical Values - Medium			
Phosphorus as P	mg/l	6	8	9	9
Potassium as K	mg/l	185	310	312	358
Magnesium as Mg	mg/l	23	53	57	53
Iron as Fe	mg/l	6	19	19	16
Manganese as Mn	mg/l	4	8	13	11

Nutrients - Total Extractable	Unit	Typical Values - Medium			
Nitrogen as N	mg/l	780	1200	2100	2140
Phosphorus as P	mg/l	59	474	500	582

Please Note: Values for elements such as K, Ca and Mg are not reported because inert forms of these elements in the aggregate would render the data meaningless.

Particle Size Distribution (% Air Dry Sample Passing)	Unit	Typical Values - Medium			
		Sedum Roof	Meadow Roof	Lawn Roof	Sedum Seed
16.0 mm		100	100	100	100
8.0 mm		43	100	100	98
4.0 mm		5	91	85	80
2.0 mm		3	7	25	30
1.0 mm		2	4	10	25

10cm Tension	Unit	Typical Values - Medium			
Air-Filled Porosity	% v/v	49	48	40	25
Water-Holding Capacity	% v/v	24	26	30	40
Solids	% v/v	27	27	30	34

50cm Tension	Unit	Typical Values - Medium			
Air-Filled Porosity	% v/v	50	49	45	27
Water-Holding Capacity	% v/v	23	24	25	38
Solids	% v/v	27	27	30	35

Weeds and Foreign Matter		Nil	Nil	Nil	Nil

1 This should not be compared with the pH of peat products (the optimal pH of peat products is much lower than for soils and composted materials).
2 Organic Matter (as loss on ignition/dry matter basis) 3 Plant-available 4 'CAT' = aqueous solution of calcium chloride + DTPA (chelating agent) – an extractant originally developed for soils and now specified in UK and European standards for composted materials (eg PAS 100) because it is more appropriate for most nutrients than the water-extraction method.

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KEMPER SYSTEM LTD
Kemper House, Mill Lane, Winwick Quay, Warrington, Cheshire WA2 8RJ
Tel: 01925 445532 Fax: 01925 575096 Email: enquiries@kempersystem.co.uk www.kempersystem.co.uk