

Carlisle Extensive Growth Media Analysis

Results on a dry weight basis unless specified otherwise

| Analysis | Units | Result | FLL Reference Values |
|---|--------------------|--------|----------------------|
| Particle Size Distribution (See accompanying report) | | | |
| < 0.05 mm (FLL ¹ reference value based on < 0.06 mm) | mass % | 6.2 | < 15 |
| Density Measurements | | | |
| Bulk Density (dry weight basis) | g/cm ³ | 0.73 | |
| Bulk Density (dry weight basis) | lb/ft ³ | 45.75 | |
| Bulk Density (at max. water-holding capacity) | g/cm ³ | 1.16 | |
| Bulk Density (at max. water-holding capacity) | lb/ft ³ | 72.52 | |
| Water/ Air Measurements | | | |
| Moisture (as received basis) | mass % | 13.4 | |
| Total Pore Volume | Vol. % | 53.3 | |
| Maximum water-holding Capacity | Vol. % | 46.3 | > 35 |
| Air-Filled Porosity (at max water-holding capacity) | Vol. % | 25.6 | > 10 |
| Water permeability (saturated hydraulic conductivity) | cm/s | 0.031 | > 0.001 |
| Water permeability (saturated hydraulic conductivity) | in/min | 0.731 | > 0.0236 |
| pH and Salt Content | | | |
| pH (CaCl ₂) | | 6.6 | 6.5 - 8.0 |
| Soluble salts (water, 1:10, m:v) | mmhos/cm | 0.1 | |
| Soluble salts (water, 1:10, m:v) | g (KCl)/L | 0.47 | < 3.5 |
| Organic Measurements | | | |
| Organic matter content | mass % | 5.2 | < 8.0 |
| Nutrients | | | |
| Phosphorus, P ₂₀₅ (CAL) | mg/L | 26.5 | < 200 |
| Potassium, K ₂ O (CAL) | mg/L | 192.4 | < 700 |
| Magnesium, Mg (CaCl ₂) | mg/L | 40.6 | < 160 |
| Nitrate + Ammonium (CaCl ₂) | mg/L | 6.3 | < 80 |

¹Forschungsgesellschaft Landschaftsentwicklung Landschaftsbau (FLL)
Guidelines for the Planning, Execution and Upkeep of Green-Roof Sites

| Particle Size Analysis | | Sum of particles less than size specified | | | |
|------------------------|------|---|------------------|------------|-----------------------|
| Diameter -mm- | % | Diameter -mm- | Diameter -in- | Sieve size | % sum of particles |
| < 0.002 | 1.3 | < 0.002 | --- | --- | 1.3 |
| 0.002-0.05 | 4.9 | < 0.05 | --- | --- | 6.2 |
| 0.05-0.25 | 5.0 | < 0.25 | 0.0098 | 60 mesh | 11.2 |
| 0.25-1.0 | 12.1 | < 1.0 | 0.0394 | 18 mesh | 23.2 |
| 1.0-2.0 | 17.3 | < 2.0 | 0.0787 | 10 mesh | 40.5 |
| 2.0-3.2 | 20.6 | < 3.2 | 0.125 | 1/8 inch | 61.1 |
| 3.2-6.3 | 23.8 | < 6.3 | 0.250 | 1/4 inch | 84.9 |
| 6.3-9.5 | 13.2 | < 9.5 | 0.375 | 3/8 inch | 98.1 |
| 9.5-12.5 | 1.9 | < 12.5 | 0.500 | 1/2 inch | 100.0 |
| > 12.5 | 0.0 | | | | |

FLL₁ Particle Size Distribution Graph for Multiple Course Extensive Systems

