

# Modular Drainage System

## Technical Specification



Property	Standard/Reference	Results	
Density		750kg /m3	
Porosity / Void Ratio	ASTM C642	Avg. 45%	
Long Term Load Fatigue Testing	Independent UKAS Lab	Specimen: Diameter 114.32 mm   Height 100 mm   Area m2 0.0102 506,010 cycles -0.2 kN to -2 kN Deformation no greater than 5%	
Compression	BS EN 604 Data Analysis Independent UKAS Certified Test Report	Specimen Height: 100mm At Avg. Compressive Stress 0.1 MPa, Strain = 3.3%	
Predicted Design Life	Design Life Analysis	60+ Years: In Standard Conditions for Drainage Parts. Sufficiently durable in standard conditions and backfill when designed and installed as drainage parts. 60 Years: In Active Loading. Under active loading of 50 to 95 kPa, based on exerted forces within the active loading zone and or Cess / 10ft / 6ft / 4ft drainage.	
Resistance to Temperature, Water	ASTM D4065	Pass	
Carbon Reporting	Life Cycle Assessment	Minimum of 90% waste materials in production of the overall composite	
Resistance to Chemicals (Petrol, Diesel, De-icer, Salt)	DEF STAN 00-035 Part 3	No visual surface change or deterioration was observed	
Toxicology and Environmental	NF P 90-112:2016	Heavy Metals Pass. PAH: Pass. Environmental Safety Confirmed.	
Water Permeability	BS EN ISO 11058 Data Analysis Independent UKAS Certified Test Report	Constant Head Specimen Area Litres/metre-sq/sec Flow Rate Qy Vertical Hydraulic Conductivity (Ky)	50 mm 0.0039 m <sup>2</sup> 49 l/m2/s 0.049 m/s 176.40 m/hr
In Plane Water Flow Soft/Soft Platens	BS EN ISO 12958 Data Analysis Independent UKAS Certified Test Report	Hydraulic Gradient Flow Rate Qx Horizontal Hydraulic Conductivity (Kx) Drainage Stacker (235 mm width x 220 mm height) Drainage Stacker (235 mm width x 100 mm height) Drainage Mat / Slab (1m2 x 75 mm thickness) Drainage Mat / Slab (1m2 x 100 mm thickness)  Hydraulic Gradient Flow Rate Qx Horizontal Hydraulic Conductivity (Kx) Drainage Stacker (235 mm width x 220 mm height) Drainage Stacker (235 mm width x 100 mm height) Drainage Mat / Slab (1m2 x 75 mm thickness) Drainage Mat / Slab (1m2 x 100 mm thickness)	0.1 (1 in 10 slope) 0.52 l/s/m 0.104 m/s 5.37 l/s 2.44 l/s 7.80 l/s 10.40 l/s  0.01 (1 in 100 slope) 0.063 l/s/m 0.126 m/s 6.51 l/s 2.96 l/s 9.45 l/s 12.6 l/s

- **Recycled Material Composition:** Recycled rubber tyres, supporting environmental sustainability.
- **High Performance Modular Units:** Engineered to optimise hydraulic performance and drainage efficacy.
- **Modular Design:** Delivers improved safety by design and drainage asset construction efficiencies.
- **Durability:** Rubber material ensures long-term durability and resilience.
- **Chemical Resistance:** Offers resistance to common chemicals such as petrol, diesel, de-icer, and salt.
- **Environmental Compliance:** Free from harmful PAHs, complying with environmental safety standards.
- **Temperature Resistance:** Maintains performance in both hot and cold environments.
- **Flexibility:** Accommodates minor ground movements, reducing the risk of system failure.
- **Load-Bearing Capacity:** Designed to handle standard loading conditions in drainage applications.
- **UV Resistant:** Treated to resist UV degradation, prolonging the system's lifespan.

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