

PRODUCT TECHNICAL DATA SHEET

AquaCell EXO 85

AQUACELL EXO · 85 MM

>95%
 VOID RATIO

883 kN/m²
 VERTICAL LOAD

1000 × 500 × 85
mm
 CELL SIZE

Infil·Atten·Irrig
 FUNCTIONS

NGS AquaCell EXO is a premium, high-strength interlocking geo-cellular system for shallow sub-surface water management — infiltration, attenuation **and passive sub-irrigation**. In a lined configuration with a capillary wick layer, stored stormwater rises by capillary action to sub-irrigate planting with no pumps or energy. Its proprietary jointing forms a continuous structural raft with exceptional compressive, tensile and bending resistance for high-load and landscaped applications.

TECHNICAL DATA

SHORT-TERM COMPRESSIVE STRENGTH		
Vertical	kN/m ²	883
Lateral (@ 23 °C)	kN/m ²	69
SHORT-TERM DEFLECTION		
Vertical	kN/m ² per mm	97.8
Lateral	kN/m ² per mm	7.2
TENSILE STRENGTH		
Single joint	kN/m ²	42.5
Single joint (1% secant)	kN/m ²	18.9
BENDING RESISTANCE		
Of unit	kN/m ²	0.72
Of single joint	kN/m ²	0.17
PHYSICAL & MATERIAL		
Dimensions (L × W × H)	mm	1000 × 500 × 85
Volumetric void ratio		>95%
Effective perforated area		>54%
Unit weight		≈ 5.0 kg
Material		Polypropylene (PP)
Intrinsic permeability (k)		≥ 1.0 × 10⁻⁵ m/s
Service temperature		-30 °C to +120 °C

KEY BENEFITS

- ▶ **Three functions in one** — infiltration, attenuation **and passive sub-irrigation**
- ▶ Passive sub-irrigation: stored stormwater feeds planting by capillary action — no pumps, no energy
- ▶ Premium high-strength cells for high-load & structural applications
- ▶ 95%+ void ratio · precise shallow depths (85-250 mm)
- ▶ BS 7533-13 tested · 50-year design life · 100% recyclable

APPLICATIONS

Landscaped streetscapes, tree pits and medians, parks and podium gardens, green infrastructure — plus car parks, podiums, basements and rainwater harvesting.

STANDARDS & TESTING

Structural load-bearing capacity tested to BS 7533-13:2009; design-life expectancy based on creep-test data per CIRIA guidelines.

BS 7533-13

ISO 9001

ISO 14001

ISO 45001

Intertek / SGS tested

PERFORMANCE & INSTALLATION

50 years (lightly loaded areas); typically 25 years under prolonged HGV loading, depending on pavement design. All calculations are based on site-specific load cases, pavement construction, soil cover and ground conditions; suitability must be approved for each project.

Frost-, hydrophobe-, acid- and hydrocarbon-resistant; inert; impervious to bacterial and fungal growth. 100% recyclable.