

PRODUCT TECHNICAL DATA SHEET

AquaCell Geo-Cellular 45T

AQUACELL GEO-CELLULAR · 45 TONNE

95-96%
 VOID RATIO

445 kN/m²
 VERTICAL LOAD

1000 × 500 × 500
mm
 CELL SIZE

Infl · Atten
 FUNCTIONS

NGS AquaCell Geo-Cellular is a high-capacity modular geo-cellular tank engineered for sub-surface stormwater storage by infiltration (soakaway) or attenuation. Interlocking 500 mm cells form a strong, flexible tank beneath trafficked and landscaped surfaces, replacing traditional aggregate with a 95%+ void ratio for maximum storage in minimum excavation.

TECHNICAL DATA

SHORT-TERM COMPRESSIVE STRENGTH		
Vertical	kN/m ²	445
Lateral (@ 23 °C)	kN/m ²	61.2
SHORT-TERM DEFLECTION		
Vertical	kN/m ² per mm	130
Lateral	kN/m ² per mm	31
PHYSICAL & MATERIAL		
Dimensions (L × W × H)	mm	1000 × 500 × 500
Gross volume	m ³	0.25
Effective storage	m ³	0.238
Volumetric void ratio		95-96%
Unit weight		11.3 kg
Material		Polypropylene (PP)
Intrinsic permeability (k)		≥ 1.0 × 10⁻⁵ m/s
Service temperature		-30 °C to +120 °C
Minimum cover		1.0 m
Maximum burial depth		Light 2.5 m · Non-trafficked 3.0 m

KEY BENEFITS

- ▶ High-capacity modular storage — aggregate sub-base replacement
- ▶ Soakaway (infiltration) and / or attenuation
- ▶ 95-96% void ratio for maximum storage in minimum excavation
- ▶ Load classes 30 / 45 / 60 tonne — non- to heavy-trafficked
- ▶ CIRIA C737 · 50-year design life · 100% recyclable

APPLICATIONS

Car parks, highways and infrastructure, large attenuation tanks, deep soakaways, residential and commercial developments.

STANDARDS & TESTING

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

CIRIA C737

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.