

MODULO GEOBENT® XP5/310

Needle-punched Clay Geosynthetic Barrier

Geotextile property	Test method	Nominal value	Tolerance	Units
Cap non-woven PP – mass per unit area	ASTM D5261	200 (5,9)	20 (0,6)	g/m ² (oz/yd ²)
Carrier woven PP – mass per unit area	ASTM D5261	110 (3,2)	10 (0,3)	g/m ² (oz/yd ²)
Powder Sodium Bentonite property				
Montmorillonite content	XRD analysis	> 80	-	%
Swell index	ASTM D5890	> 24	-	ml/2g
Fluid loss	ASTM D5891	< 18	-	ml
Finished GBR_C property¹				
Bentonite mass per unit area (at 12% moisture)	ASTM D 5993	5.000 (1,02)	100 (0,02)	g/m ² (lb/ft ²)
Bentonite mass per unit area (at 0% moisture)	ASTM D 5993	4.460 (0,91)	90 (0,02)	g/m ² (lb/ft ²)
GCL mass per unit area (at 12% moisture)	ASTM D 5993	5.310 (1,09)	130 (0,03)	g/m ² (lb/ft ²)
Hydraulic conductivity (k ₂₀)	ASTM D5887	2·10 ⁻⁹	8,5·10 ⁻¹⁰	cm/s
Index flux (q _i)	ASTM D5887	5·10 ⁻⁹	8,5·10 ⁻¹⁰	(m ³ /m ²)/s
Tensile strength – MD	ASTM D 6768	12 (69)	1,2 (6,9)	kN/m (lbf/in)
Tensile strength – CMD	ASTM D 6768	12 (69)	1,2 (6,9)	kN/m (lbf/in)
Strain at max load – MD/CMD	ASTM D 6768	< 30	-	%
Static puncture strength	ASTM D 6241	2,2 (495)	0,11 (25)	kN (lbf)
Peel strength – MD ²	ASTM D6496	65 (15)	6,5 (1,5)	N (lbf)
Grab strength – MD	ASTM D 4632	500 (112)	50 (11)	N (lbf)
Hydrated internal shear strength – MD ³	ASTM D 6243	24 (502)	-	kPa (Psf)
Roll size				
Thickness ⁴	ASTM D5199	7	0,7	mm
Dimensions (H x L)		44 x 5 (144,4 x 16,4)		m (ft x ft)
Total area		220 (2368)	-	m ² (ft ²)
Total weight		1.209 (2665)	48 (106,6)	kg (lb)

¹MD: machine direction, CMD: cross machine direction

²Peak value measured on 10 cm width specimen

³Peak values measured at 30 kPa normal stress for a hydrated specimen. The value is not representative of real condition, but both internal and interface resistance has to be verified with reference to proposed design.

⁴Average value with max tolerance of 10% measured at 2 kPa normal stress for a specimen hydrated for 24 h.

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The above mentioned specifications may be changed without any notice

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