TENCATE
Polyfelt®

Enviromat®

Geosynthetic clay liners

Enviromat® is a new generation geosynthetic clay liner (GCL) made from high quality polypropylene geotextiles and premium grade sodium bentonite. Enviromat® GCLs are fibre-reinforced by needle punching the composites across the entire surface area of the product. Sodium bentonite clay is a natural occurring clay mineral that swells when wet and hydrated. When this hydration occurs under confinement, the bentonite swells to form a low permeability clay layer that acts as a hydraulic barrier to fluids.

Property		Test Standard	Unit	Enviromat® 4000	Enviromat® 5000
GCL mass components					
Cover nonwoven mass		ISO 9864	g/m^2	180	180
Bentonite mass		ASTM D5993	g/m^2	4000	5000
Carrier PP woven mass		ISO 9864	g/m^2	150	200
Total GCL mass		ASTM D5993	g/m^2	4330	5380
Bentonite properties					
Swell index		ASTM D5890	mL/2g (min.)	24	24
Fluid loss		ASTM D5891	mL (max.)	18	18
GCL properties					
Grab strength		ASTM D4632	N	400	450
Tensile strength	MD	ISO 10319	kN/m	9	15
Tensile strength	CD	ISO 10319	kN/m	6	8
CBR puncture		ISO 12236	N	1200	2000
Peel strength		ASTM D6496	N/m	360	360
Hydrated shear strength		ASTM D6243 (mod.)	kPa	24	24
Hydraulic conductivity		ASTM D5887	m/s	5×10^{-11}	5×10^{-11}
Index flux		ASTM D5887	$(m^3/m^2)/s$	1×10^{-8}	1×10^{-8}
Dimension					
Width			m	4.5	4.5
Length			m	30	30

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The values given are indicative and correspond to average values obtained in accredited testing laboratories and institutes.

Further details of this application and products can be obtained by contacting your nearest TenCate Technical Support office. Unauthorized reproduction and distribution is prohibited. This document is provided as a supporting service only. The information contained in this document is to the best of our knowledge true and correct. No warranty whatsoever is expressed or implied or given. Engineers wishing to apply this information shall satisfy themselves on the validity of the input data relative to the applicable soil and engineering conditions and in doing so assume design liability.

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materials that make a difference

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