

BENTOMAT AS5000

GEOSYNTHETIC CLAY BARRIER (GBR-C)

BENTOMAT AS5000 is a reinforced GBR-C consisting of a layer of sodium bentonite between a woven and a nonwoven geotextile, which are needlepunched together to provide internal reinforcement. The internal reinforcement minimizes clay shifting, thus allowing the GBR-C to maintain consistent low permeability and maximum performance under a wide variety of field conditions.

TECHNICAL DATA			
MATERIAL PROPERTY	TEST METHOD	TYPICAL VALUE	TEST FREQUENCY
GBR-C			
Index Flux ⁽¹⁾	ASTM D 5887/EN 16416	3,0x10 ⁻⁰⁹ (m ³ /m ²)/s	Production week ⁽²⁾
Hydraulic Conductivity	ASTM D 5887/EN 16416	1,5x10 ⁻¹¹ m/s	Production week ⁽²⁾
Total Mass/Unit Area ⁽³⁾	EN 14196	5,30 kg/m ²	5000 m ²
Bentonite Mass/Unit Area ⁽³⁾	EN 14196	5,00 kg/m ²	5000 m ²
Tensile Strength MD/CMD ⁽⁴⁾	EN ISO 10319	11,0/11,0 kN/m	5000 m ²
Elongation at Break MD/CMD ⁽⁵⁾	EN ISO 10319	15%/10%	5000 m ²
Puncture Resistance (CBR) ⁽⁶⁾	EN ISO 12236	1,8 kN	5000 m ²
Peel Strength ⁽⁷⁾	ASTM D 6496	400 N/m	5000 m ²
Thickness	EN ISO 9863-1	7,5 mm	5000 m ²
Roll Length	–	40,0 m	Continuous
Roll Width	–	5,0 m	Continuous
BENTONITE			
Free Swell	ASTM D 5890	25 ml/2 g	5000 m ²
Fluid Loss	ASTM D 5891	max 18 ml	5000 m ²
Montmorillonite content ⁽⁸⁾	XRD	80%	Certified by supplier
GEOTEXTILES (PP)			
Non-Woven Mass/Unit Area	EN ISO 9864	200 g/m ²	Certified by supplier
Woven Mass/Unit Area	EN ISO 9864	100 g/m ²	Certified by supplier

Notes:

¹ Index Flux with tolerance +0,5x10⁻⁰⁹ (m³/m²)/s

² Production week = average 75 000 m² of one type of Bentomat

³ Bentonite mass/unit area reported at 12% moisture content

⁴ Tensile Strength with tolerance -2,0 kN/m

⁵ Elongation at break is average value based on statistical data for this type of geotextiles. It may vary from above data.

⁶ Puncture Resistance (CBR) with tolerance -0,2 kN

⁷ Peel Strength testing is performed in machine direction

⁸ Montmorillonite content with tolerance ±10%