

## Technical Data Sheet

### Bentomat AS5000-1 – Geosynthetic Clay Barrier (GBR-C)

BENTOMAT AS5000-1 is a reinforced GBR-C consisting of a layer of sodium bentonite between a woven and a nonwoven geotextile, which are needle punched 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
<b>GBR-C</b>			
Index Flux	ASTM D 5887	3,0x10 <sup>-09</sup> (m <sup>3</sup> /m <sup>2</sup> )/s	Production week (1)
Hydraulic Conductivity	ASTM D 5887	1,5x10 <sup>-11</sup> m/s	Production week (1)
Total Mass/ Unit Area (2)	ASTM D 5887	5,33kg/m <sup>2</sup>	5000m <sup>2</sup>
Bentonite Mass/ Unit Area (2)	EN 14196	5,00kg/m <sup>2</sup>	5000m <sup>2</sup>
Tensile Strength MD/CMD (3)	EN ISO 10319	12,0/ 12,0kN/m	5000m <sup>2</sup>
Elongation at Break MD/CMD	EN ISO 10319	15%	5000m <sup>2</sup>
Puncture Resistance (CBR) (4)	EN ISO 12236	2,0kN	5000m <sup>2</sup>
Peel Strength (5)	ASTM D 6496	650N/m	5000m <sup>2</sup>
Thickness	EN ISO 9863-1	7,5mm	5000m <sup>2</sup>
Roll Length	-	40,0,	Continuous
Roll Width	-	5,0m	Continuous
<b>BENTONITE</b>			
Free Swell	ASTM D 5890	25ml/2g	5000m <sup>2</sup>
Fluid Loss	ASTM D 5891	Max 18ml	5000m <sup>2</sup>
Montmorillonite content	XRD	80%	Certified by supplier
<b>GEOTEXTILES (PP) / GEOMEMBRANE (PE)</b>			
Non-Woven Mass/ Unit Area	EN ISO 9864	200g/m <sup>2</sup>	Certified by supplier
Woven Mass/Unit Area	EN ISO 9864	130g/m <sup>2</sup>	Certified by supplier

#### Notes:

1. Production week = average 75 000 m<sup>2</sup> of one type of Bentomat.
2. Bentonite mass/unit area reported at 12% moisture content.
3. Tensile Strength with tolerance –1,kN/m.
4. Puncture Resistance (CBR) with tolerance –0,2kN.
5. Peel Strength testing is performed in machine direction.

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