

TECHNICAL REFERENCE 401-BMSTM

BENTOMAT® STM

CERTIFIED PROPERTIES

MATERIAL PROPERTY	TEST METHOD	TEST FREQUENCY	REQUIRED VALUES
Bentonite Swell Index ¹	ASTM D 5890	1 per 50 tonnes	24 mL/2g min.
Bentonite Fluid Loss ¹	ASTM D 5891	1 per 50 tonnes	18 mL/2g min.
Bentonite Mass/Area ²	ASTM D 5993	40,000 ft ² (4,000 m ²)	0.50 lb/ft ² (2.4 kg/m ²) min.
GCL Tensile Strength ³	ASTM D 6768	200,000 ft ² (20,000 m ²)	30 lb/in (53 N/cm) MARV
GCL Peel Strength ³	ASTM D 6496	40,000 ft ² (4,000 m ²)	3.5 lbs/in (6.1 N/cm) min.
GCL Index Flux ⁴	ASTM D 5887	Weekly	3 X 10 ⁻⁸ m ³ /m ² /sec max.
GCL Hydraulic Conductivity ⁴	ASTM D 5887	Weekly	1 X 10 ⁻⁸ cm/sec max.
GCL Hydrated Internal Shear Strength ⁵	ASTM D 5321 ASTM D 6243	Periodic	500 psf (24 kPa) typical @200 psf

Bentomat STM is a reinforced GCL engineered for mining applications consisting of a layer of sodium bentonite between a woven and a nonwoven geotextile, which are needlepunched together.

Notes

- 1 Bentonite property tests performed at a bentonite processing facility before shipment to CETCO GCL production facilities.
- 2 Bentonite mass/area reported at 0 percent moisture content.
- 3 All tensile strength testing is performed in the machine direction using ASTM D 6768. All peel strength testing is performed using ASTM D 6496. Upon request, tensile and peel results can be reported per modified ASTM D 4632 using 4 inch grips.
- 4 Index flux and permeability testing with deaired distilled/deionized water at 80 psi (551kPa) cell pressure, 77 psi (531 kPa) headwater pressure and 75 psi (517 kPa) tailwater pressure. Reported value is equivalent to 925 gal/acre/day. Actual flux values vary with field condition pressures. The last 20 weekly values prior the end of the production date of the supplied GCL may be provided.
- 5 Peak value measured at 200 psf (10 kPa) normal stress for a specimen hydrated for 48 hours. Site-specific materials, GCL products, and test conditions must be used to verify internal and interface strength of the proposed design.

CETCO has developed an edge enhancement system that eliminates the need to use additional granular sodium bentonite within the overlap area of the seams. We call this edge enhancement, SUPERGROOVE™, and it comes standard on both longitudinal edges of BENTOMAT® STM. It should be noted that SUPERGROOVE™ does not appear on the end-of-roll overlaps and recommend the continued use of supplemental bentonite for all end-of-roll seams.

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STANDARD PANEL SPECIFICATIONS

Panel Dimensions	Width = 15 ft (4.57 m) Length = 200 ft (60.9 m)
Total Panel Area	3,000 sq ft (278.8 sqm)
Effective Area	2,870 sq ft (266.7 sqm) {Assumes 6 in (150 mm) edge overlap and 2 ft (600 mm) end-of-roll overlap}

STANDARD ROLL SPECIFICATIONS

Dimensions	Length = 15 ft (4.5 m); Diameter = 24 in (600 mm)
Nominal Weight	2,500 lbs (1,133 Kg)
Core Diameter	4 in (100 mm) I.D.
Packaging	8 mil (0.2 mm) polyethylene sleeve

STANDARD SHIPPING SPECIFICATIONS

20' Container Shipment Size	14 rolls; 42,000 sqft (3,903 sqm) (high cube)
Flatbed Truck Shipment Size	17 rolls; 51,000 sqft (4,740 sqm)

UNLOADING AND HANDLING EQUIPMENT

Core Pipe	Length = 16 ft (4.9 m); O.D. = 3.5 in (90 mm) Strength Rating = XXH or strongest available
Alternatives	Solid steel pipe with above dimensions Custom-fabricated “stinger” for forklift
Spreader Bar	I-Beam supported by chains
Straps	Factory-placed lifting straps available upon request

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IMPORTANT: The information contained herein supersedes all previous printed versions, and is believed to be accurate and reliable. For the most up-to-date information, please visit www.CETCO.com. CETCO accepts no responsibility for the results obtained through application of this product. CETCO reserves the right to update information without notice.



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