

TECHNICAL REFERENCE 401-BMST

BENTOMAT® ST

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) | 0.75 lb/ft ² (3.6 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 | 1 X 10 ⁻⁸ m ³ /m ² /sec max. |
| GCL Hydraulic Conductivity ⁴ | ASTM D 5887 | Weekly | 5 X 10 ⁻⁹ cm/sec max. |
| GCL Hydrated Internal Shear Strength ⁵ | ASTM D 5321 ASTM D 6243 | Periodic | 500 psf (24 kPa) typical @200 psf |

Bentomat ST is a reinforced GCL consisting of a layer of sodium bentonite between a woven and a nonwoven geotextiles, 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® ST. 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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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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