



"Blanketing Nature With Nature"

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Effective: 6/27/2017

RE: Certificate of Conformance: Excel CS-3 All Natural™

To Whom it May Concern:

This letter is to certify that Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as EXCEL CS-3 All Natural. Each blanket is subjected to Western Excelsior's Quality Assurance Program and is manufactured to the specifications listed in document number WE_EXCEL_CS3AN_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for Excel CS-3 All Natural. Document number WE_EXCEL_CS3AN_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE_EXCEL_CS3AN_SII and WE_EXCEL_CS3AN_CII for hillslope and channel installations, respectively. A copy of document number WE_EXCEL_CS3AN_SPEC is attached; all other documentation may be obtained by calling Western Excelsior Technical Services at 1-866-540-9810, at www.westernexcelsior.com or by email at wexcotech@westernexcelsior.com.

Regards,

A handwritten signature in black ink that reads "Chad M. Lipscomb".

Chad M. Lipscomb, PE (CO), CPESC
Director, Technical Services
Western Excelsior Corporation



Material Properties and Dimensions

Excel CS-3 All Natural™



Specifications

Western Excelsior manufactures a full line of Rolled Erosion Control Products (RECPs). The Coconut/Straw Excel CS-3 All Natural Extended Term Erosion Control Blanket consists of 30% coconut fibers and 70% certified noxious weed free agricultural straw manufactured into a continuous matrix. The coconut/straw matrix is confined by a biodegradable, jute/scrim net on top and bottom, mechanically (stitch) bound on two inch centers with a biodegradable, cotton thread. Excel CS-3 All Natural is intended for slope or channel erosion control applications requiring up to twenty-four months of functional longevity. Actual field longevity is dependent on soil and climatic conditions.

Each roll of EXCEL CS-3 All Natural is made in the USA and manufactured under Western Excelsior's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness. Verifiable values are provided in Table 1 and product characteristics are provided in Table 2.

Table 1- Specified Expected Values

Tested Property	Test Method	Value
Tensile Strength (MD) x (TD)	ASTM D6818	16.0 lb/in (2.8 kN/m) x 11.0 lb/in (1.9 kN/m)
Elongation (MD) x (TD)	ASTM D6818	20 % x 20 %
Mass Per Unit Area	ASTM D6475	8.9 oz/yd ² (302 g/m ²)
Thickness	ASTM D6525	0.34 in (9 mm)
Light Penetration	ASTM D6567	10 % open
Water Absorption	ASTM D1117	325 %

Table 2 - Netting

Top Net Type	Biodegradable, Jute Scrim Leno Weave
Bottom Net Type	Biodegradable, Jute Scrim Leno Weave
Top Net Opening Dimensions	0.5 in (13 mm) x 1.0 in (25 mm)
Bottom Net Opening Dimensions	0.5 in (13 mm) x 1.0 in (25 mm)

Excel CS-3 All Natural is available in multiple roll sizes ranging in width from 8.0 ft to 16.0 ft. and 112.5 ft to 600 ft in length. Standard roll sizes are 100 square yards, measuring 8.0 ft wide by 112.5 ft long. Custom roll sizes are available upon request.

The information contained herein may represent product index data, performance ratings, bench scale testing or other material utility quantifications. Each representation may have unique utility and limitations. Every effort has been made to ensure accuracy, however, no warranty is claimed and no liability shall be assumed by Western Excelsior Corporation (WEC) or its affiliates regarding the completeness, accuracy or fitness of these values for any particular application or interpretation. While testing methods are provided for reference, values shown may be derived from interpolation or adjustment to be representative of intended use. For further information, please feel free to contact WEC.