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"Blanketing Nature With Nature"

Effective: 09/16/2011

RE: Certificate of Conformance: Excel PP5-10™

To Whom it May Concern:

This letter is to certify that Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as EXCEL PP5-10. Each blanket is subjected to Western Excelsior's Quality Assurance Program and is manufactured to the specifications listed in document number WE_EXCEL_PP510_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for Excel PP5-10. Document number WE_EXCEL_PP510_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE_EXCEL_PP510_SII and WE_EXCEL_PP510_CII for hillslope and channel installations, respectively. A copy of document number WE_EXCEL_PP510_SPEC is attached; all other documentation may be obtained by calling Western Excelsior Technical Services at 1-800-967-4009, at www.westernexcelsior.com or by email at wexcotech@westernexcelsior.com.

Regards,

A handwritten signature in black ink, appearing to read "Chad M. Lipscomb". The signature is written in a cursive, flowing style.

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

MATERIAL PROPERTIES AND DIMENSIONS



EXCEL PP5-10™



Specifications

Western Excelsior manufactures a full line of Rolled Erosion Control Products (RECPs). Excel PP5-10 Turf Reinforcement Mat is composed of 100% synthetic components. A matrix of green polypropylene fibers is mechanically (stitch) bound between two UV stabilized, heavy duty synthetic nets. Stitching is secured on two inch centers using UV stabilized, heavy duty polypropylene thread. Excel PP5-10 is a permanent, three-dimensional TRM that provides immediate erosion protection and long term turf reinforcement and is intended for slope or channel applications requiring erosion protection for greater than thirty-six months.

Each roll of EXCEL PP5-10 is manufactured under Western Excelsior's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness. Verified index properties 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	20.8 lb/in (3.6 kN/m) x 17.7 lb/in (3.1 kN/m)
Elongation (MD) x (TD)	ASTM D6818	25 % x 25 %
Mass Per Unit Area	ASTM D6566	10.0 oz/yd ² (339 g/m ²)
Thickness	ASTM D6525	0.36 in (9 mm)
Light Penetration	ASTM D6567	25 % open
Water Absorption	ASTM D1117	N/A %
Resiliency	ASTM D 6524	87 %
Porosity	Computed	96 %
UV Stability	ASTM D 4355	100% (500hr) / 90% (1000hr) %

Table 2 - Netting

Top Net Type	Synthetic, UV Stable
Bottom Net Type	Synthetic, UV Stable
Top Net Opening Dimensions	0.7 in (17 mm) x 0.7 in (17 mm)
Bottom Net Opening Dimensions	0.7 in (17 mm) x 0.7 in (17 mm)

Excel PP5-10 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.

Document # WE_EXCEL_PP510_SPEC. This document has been developed to provide the characteristic properties of the product described. For questions, to request performance data or installation recommendations, contact Western Excelsior at 800-967-4009 or wexcotech@westernexcelsior.com. Updated 09/16/2011.