



Standard Material Certificatation for Conformance and Delivery - Excel PP5-12™

"Blanketing Nature With Nature"

To Whom it May Concern:

This document has been drafted to certify Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as Excel PP5-12. Each blanket is subjected to Western Excelsior's Quality Assurance Program and is manufactured to the specifications listed in document number WE_EXCEL_PP512_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for Excel PP5-12. Document number WE_EXCEL_PP512_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE_EXCEL_PP512_SII and WE_EXCEL_PP512_CII for hillslope and channel installations, respectively. A copy of document number WE_EXCEL_PP512_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.

Since most Western Excelsior products are sold to distributors and stocked, Western Excelsior is typically unable to certify material type or quantity delivered to the project/project site. However, space is provided below for distributor/contractor certification of materials delivered to the project/project site.

Regards,

A handwritten signature in black ink, appearing to read "Chad M. Lipscomb".

Chad M. Lipscomb, PE (CO), CPESC
Director, Technical Services
Western Excelsior Corporation
chad@westernexcelsior.com
866-540-9810

Standard Material Delivery Certification

Material Provided by (Distributor/Contractor): _____

Material Provided to (Contractor/Project): _____

Project Name / Project Number: _____

Rolls/Square Yards Provided: _____

Specification #: _____

Signature: _____

Date: _____

Title: _____



Material Properties and Dimensions

Excel PP5-12™



Specifications

Western Excelsior manufactures a full line of Rolled Erosion Control Products (RECPs). Excel PP5-12 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 PP5-12 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 PP5-12 is made in the USA and manufactured under Western Excelsior's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness. Typical manufactured 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	25.0 lb/in (4.4 kN/m) x 18.0 lb/in (3.2 kN/m)
Elongation (MD) x (TD)	ASTM D6818	25 % x 35 %
Mass Per Unit Area	ASTM D6566	12.0 oz/yd ² (407 g/m ²)
Thickness	ASTM D6525	0.38 in (10 mm)
Light Penetration	ASTM D6567	20 % open
Water Absorption	ASTM D1117	N/A %
Resiliency	ASTM D 6524	88 %
Porosity	Computed	96 %
UV Stability	ASTM D 4355	80% (1000 hr) %

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 PP5-12 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.