

# MATERIAL PROPERTY DATA SHEET

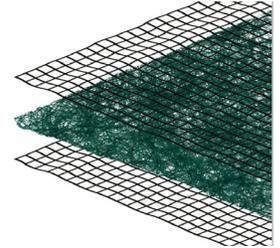


## EXCEL PP5-8™

Permanent • Double Net • Poly-Fiber Matrix •  
Turf Reinforcement Mat

### DESCRIPTION

Excel PP5-8 Turf Reinforcement Mat (TRM) is composed of 100% synthetic green fibers mechanically (stitch) bound between two UV stabilized, synthetic nets. Stitching is secured on two-inch centers using UV stabilized, synthetic thread. Excel PP5-8 is a permanent, three-dimensional TRM that provides immediate erosion protection and long-term turf reinforcement and is intended for applications requiring erosion protection for greater than thirty-six months.



Each roll of Excel PP5-8 is made in the USA and manufactured under Western Green's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness.

Material Content	
Matrix	Synthetic Fibers
Netting	Top Net: Mediumweight, UV stable Bottom Net: Mediumweight, UV stable
Thread	Synthetic, UV Stable

Standard Roll Sizes				
Width	8 ft	(2.4 m)	16 ft	(4.9 m)
Length	112 ft	(34.0 m)	112 ft	(34.0 m)
Weight ± 10%	59 lb	(27.0 kg)	118 lb	(54.0 kg)
Area	100 sy	(83.6 m <sup>2</sup> )	200 SY	(167.0 m <sup>2</sup> )

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 5.B / ECTC Type 5.B
TTI Approvals	Class 2 Type H
NTPEP Number	ECP-2020-01-008

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Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.30 in.	(8 mm)
Mass/Unit Area	ASTM D6566	8.0 oz/sy	(275 g/sm)
Tensile Strength – MD	ASTM D6818	300 lbs/ft	(4.4 kN/m)
Tensile Strength – TD	ASTM D6818	200 lbs/ft	(2.9 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	30%	
UV Stability	ASTM D4355	80% @1000 hr	
Light Penetration	ASTM D6567	30%	
Biomass Improvement	ASTM D7322	400%	
Specific Gravity	ASTM D792	57.4 lb/ft <sup>3</sup>	(0.92 g/cm <sup>3</sup> )
Porosity	ECTC	96%	

Design Parameters		
Property	Unvegetated	Vegetated <sup>3</sup>
RUSLE C Factor <sup>2</sup>	0.10	N/A
Slope Maximum Gradient <sup>1</sup>	1H:1V	1H:1V
Permissible Shear Stress <sup>2</sup>	2.0 psf (95 Pa)	8.0 psf (385 Pa)
Permissible Velocity <sup>2</sup>	7.0 fps (2.1 m/s)	12.0 fps (3.7 m/s)
$\tau_{veg} / \tau_{TRM}$ (HEC-15)	N/A	0.67

Manning's n Roughness (HEC-15)		
$\tau_{lower}$	$\tau_{mid}$	$\tau_{upper}$
0.031	0.030	0.029

1 Maximum Gradient a recommendation for typical installations.

2 Hydraulic thresholds compliant with ASTM D6459/D6460 but generalized for typical applications.

3 Vegetated values dependent on established stand of vegetation

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Scan for additional and updated product information, or [click here](#).

