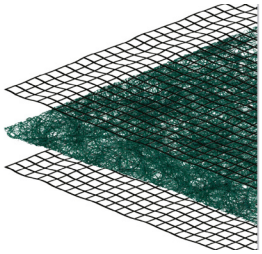
Carthage Mills **Product Data**

Geotextiles | Erosion Control | Geogrids | Geomembranes

PP5-10 Turf Reinforcement Mat

DESCRIPTION

Excel PP5-10 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 PP5-10 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 PP5-10 is made in the USA.

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%	63 lb	(29.0 kg)	126 lb	(58.0 kg)
Area	100 sy	(83.6 m^2)	200 SY	(167.0 m^2)

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 5.C / ECTC: 5.D
TTI Approvals	Class 2 Type H
NTPEP Number	ECP-2018-04-009

Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.38 in.	(10 mm)
Mass/Unit Area	ASTM D6566	10.0 oz/sy	(350 g/sm)
Tensile Strength – MD	ASTM D6818	325 lbs/ft	(4.7 kN/m)
Tensile Strength – TD	ASTM D6818	225lbs/ft	(3.3 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	30%	
UV Stability	ASTM D4355	80% @1000 hr	
Light Penetration	ASTM D6567	25%	
Biomass Improvement	ASTM D7322	400%	
Specific Gravity	ASTM D792	57.4 lb/ft^3	(0.92 g/cm^3)
Porosity	ECTC	96%	

Design Parameters		
Property	**Unvegetated**	**Vegetated[3]**
RUSLE C Factor[2]	0.03	N/A
Slope Maximum Gradient[1]	0.5H:1V	0.5H:1V
Permissible Shear Stress[2]	2.3 psf (110 Pa)	12.0 psf (575 Pa)
Permissible Velocity[2]	8.0 fps (2.4 m/s)	18.0 fps (5.5 m/s)
τ_{veg} / τ_{TRM} (HEC-15)	N/A	0.55

Manning's n Roughness (HEC-15)		
τ_{lower}	τ_{mid}	τ_{upper}
0.035	0.028	0.027

1 Maximum Gradient a recomendation 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

Effective 12/2025

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