

MATERIAL PROPERTY DATA SHEET

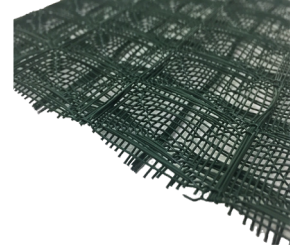


TMAX 3K™

Permanent • 3-D Woven • UV Stable •
High Performance Turf Reinforcement Mat

DESCRIPTION

TMAX 3K is a High-Performance Turf Reinforcement Mat (HP-TRM) produced by weaving 100% UV-stabilized, high denier synthetic mono-filament yarns woven into permanent, high-strength, three-dimensional structure. The optimized properties of the material provide immediate erosion control with excellent vegetation establishment and long-term turf reinforcement. The strength, resiliency, and durability of TMAX 3K provides a decades long design life and suitability for harsh environments including debris flow and light vehicle traffic. When incorporated with high-load anchors, PP5-Pro can add strength to sub-surface soil and improve slope stability.



Material Content	
Woven, Single Layer	Green or Tan

Standard Roll Sizes				
Width	11.5 ft	(3.5 m)	11.5 ft	(3.5 m)
Length	78 ft	(24.0 m)	156 ft	(47.5 m)
Weight ± 10%	72 lb	(33.0 kg)	144 lb	(66.0 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.F
TTI Approvals	Class 2 Type H
NTPEP Number	ECP-2022-01-011

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Index Property	Test Method	MARV	
Thickness	ASTM D6525	0.3 in.	(6 mm)
Mass/Unit Area	ASTM D6566	7.0 oz/sy	(225 g/sm)
Tensile Strength – MD	ASTM D6818	3,000 lbs/ft	(43.8 kN/m)
Tensile Strength – TD	ASTM D6818	3,000 lbs/ft	(43.8 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	25%	
UV Stability	ASTM D4355	90% @3000 hr	
UV Stability	ASTM D7238	90% @3000 hr	
Resiliency	ASTM D6524	70%	
Light Penetration	ASTM D6567	35%	
Biomass Improvement	ASTM D7322	300%	
Specific Gravity	ASTM D792	57.4 lb/ft ³	(0.92 g/cm ³)
Porosity	ECTC	96%	
Carbon Footprint	GHG*	1.3 kg CO ₂ e/m ²	

Design Parameters		
Property	Unvegetated	Vegetated ³
RUSLE C Factor ²	N/A	N/A
Slope Maximum Gradient ¹	0.5H:1V	0.5H:1V
Permissible Shear Stress ²	2.3 psf	14.0 psf (670 Pa)
Permissible Velocity ²	8.0 fps	20.0 fps (6.1 m/s)
τ_{veg} / τ_{TRM} (HEC-15)	N/A	0.35

Manning's n Roughness (HEC-15)		
τ_{lower}	τ_{mid}	τ_{upper}
0.033	0.030	0.028

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

*WRI/WBCSD Greenhouse Gas Protocol: Product Life Cycle Accounting and Reporting Standard, 2013.