

# MATERIAL PROPERTY DATA SHEET

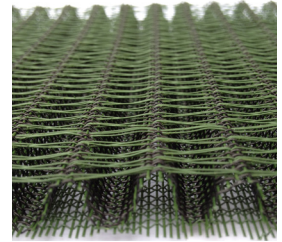


## W3000™

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

### DESCRIPTION

The W3000™ high-performance turf reinforcement mat (HP-TRM) is a machine-produced mat of 100% UV-stabilized, high denier synthetic monofilament yarns woven into permanent, high-strength, three-dimensional turf reinforcement matting. The mat provides sufficient thickness, optimum open area, and three-dimensionality for effective erosion control and vegetation reinforcement against high flow induced shear forces. The mat has high tensile strength for excellent damage resistance and for increasing the bearing capacity of vegetated soils subject to heavy loads from maintenance equipment and other vehicular traffic. The material has very high interlock and reinforcement capacities with both soil and root systems and is designed for erosion control applications on steep slopes and vegetated waterways.



Material Content	
Woven, Single Layer	Green

Standard Roll Sizes		
Width	10 ft	(30.5 m)
Length	90 ft	(27.4 m)
Weight ± 10%	90 lb	(41 kg)
Area	100 sy	(83.6 m <sup>2</sup> )

*Material available in custom roll sizes*

Approvals & Classification	
Classification	FHWA: Type 5.C / ECTC: 5.F
TTI Approvals	N/A
NTPEP Number	N/A

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Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.40 in.	(10 mm)
Mass/Unit Area	ASTM D6566	14.7 oz/sy	(500 g/sm)
Tensile Strength – MD	ASTM D6818	3,600 lbs/ft	(52.6 kN/m)
Tensile Strength – TD	ASTM D6818	3,800 lbs/ft	(55.5 kN/m)
Elongation - MD	ASTM D6818	35%	
Elongation – TD	ASTM D6818	20%	
UV Stability	ASTM D4355	90% @3000 hr	
Light Penetration	ASTM D6567	10%	
Biomass Improvement	ASTM D7322	300%	
Specific Gravity	ASTM D792	57.4 lb/ft <sup>3</sup>	(0.92 g/cm <sup>3</sup> )
Porosity	ECTC	95%	
Carbon Footprint	GHG*	N/A	

Design Parameters		
Property	Unvegetated	Vegetated <sup>3</sup>
RUSLE C Factor	N/A	N/A
Slope Maximum Gradient <sup>1</sup>	0.5H:1V	0.5H:1V
Permissible Shear Stress <sup>2</sup>	N/A	14.0 psf (670 Pa)
Permissible Velocity <sup>2</sup>	N/A	20.0 fps (6.1 m/s)
$\tau_{veg} / \tau_{TRM}$ (HEC-15)	N/A	0.50

Manning's n Roughness (HEC-15)		
$\tau_{lower}$	$\tau_{mid}$	$\tau_{upper}$
N/A	N/A	N/A

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.