



# VMAX<sup>3</sup> P550

## *Product Specification*

Composite Turf Reinforcement Mat (C-TRM)

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**Salix**



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For erosion protection and habitat creation



## Product Description

The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 100% UV stable polypropylene fibre matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between an ultra-heavy duty UV stabilized nettings with 1.27 x 1.27 cm openings, an ultra-heavy UV stabilized, dramatically corrugated (crimped) intermediate netting 1.27 x 1.27 cm openings, and covered by an ultra-heavy duty UV stabilized nettings with 1.27 x 1.27 cm openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 3.81 cm centres with UV stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with a coloured thread stitched along both outer edges as an overlap guide for adjacent mats.

The P550 shall meet Type 5A, B, and C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA). FP – 03 Section 713.18

## Material Content

Matrix	100% UV stable Polypropylene Fibre	0.27 kg/m <sup>2</sup>
Netting	Top and Bottom, UV stabilized Polypropylene Middle, Corrugated UV stabilized Polypropylene	11.7 kg/100m <sup>2</sup> 11.7 kg/100m <sup>2</sup>
Thread	Polypropylene, UV stable	

## Standard Roll Sizes

Width	2.0 m
Length	15 m
Weight ± 10%	21 kg
Thread	30 m <sup>2</sup>





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Bench Scale Testing (NTPEP)		
Test Method	Parameters	Results
ASTM D7101	50mm /hr-30min 100mm /hr-30min 150mm /hr-30min	SLR** = 8.91 SLR** = 9.71 SLR** = 10.58
ASTM D7207	Shear at 12.7 mm soil loss	220 Pa
ASTM D6322	Top Soil, Fescue, 21 day incubation	378% improvement of biomass
<small>* Bench scale tests should not be used for design purposes  ** Soil Loss Ratio = Soil Loss Bare Soil/ Soil Loss with RECP</small>		

Maximum Permissible Shear Stress		
	Short Duration	Long Duration
Phase 1 Unvegetated	191 Pa	156 Pa
Phase 2 Partially Veg.	576 Pa	576 Pa
Phase 3 Fully Veg.	672 Pa	576 Pa
Unvegetated Velocity	3.8 m/s	
Vegetated Velocity	7.6 m/s	

NTPEP ASTM D6460 Large Scale Channel	
Vegetated Shear	> 632 Pa
Vegetated Velocity	7.47 m/s

Roughness Coefficients – Unvegetated	
Flow Depth	Manning's n
≤ 0.15 m	0.041
0.15 – 0.60 m	0.040-0.013
≥ 0.60 m	0.013

Index Property	Test Method	Typical
Thickness	ASTM D6525	18.29 mm
Resiliency	ASTM 6524	95%
Density	ASTM D792	0.892 g/cm <sup>3</sup>
Mass/ Unit Area	ASTM 6566	723 g/m <sup>2</sup>
UV Stability	ASTM D4355 /1000 hr	100%
Porosity	ECTC Guidelines	96%
Stiffness	ASTM D1388	4087934 mg-cm
Light Penetration	ASTM D6567	16.5%
Tensile Strength – MD	ASTM D6818	21.07 kN/m
Elongation – MD	ASTM D6818	40.5%
Tensile Strength – TD	ASTM D6818	17.67 kN/m
Elongation – TD	ASTM D6818	28.8%

NTPEP ASTM D6460 Large Scale Channel			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 6 m	0.0005	0.015	0.043
6-15 m	0.0173	0.031	0.050
≥ 15 m	0.035	0.047	0.057

