

Specification Sheet

VMax® P550® Turf Reinforcement Mat

DESCRIPTION

The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 100% UV stable polypropylene fiber 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 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, an ultra heavy UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.5 x 0.5 inch (1.27 x 1.27 cm) openings, and covered by an ultra heavy duty UV stabilized nettings with 0.50 x 0.50 inch (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 1.50 inch (3.81cm) centers with UV stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with a colored thread stitched along both outer edges as an overlap guide for adjacent mats.

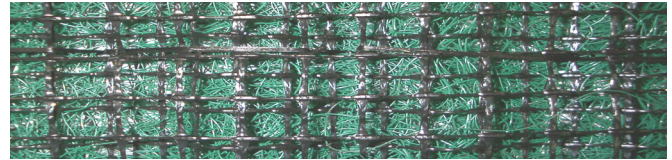
The P550 shall meet Type 5A, 5B, and 5C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18

Material Content

Material	Description	Weight
Matrix	100% UV stable polypropylene fiber	0.5 lb/sy (0.27 kg/sm)
Netting	Top and Bottom, UV-Stabilized Polypropylene	24 lb/1000 sf (11.7 kg/100 sm)
	Middle, Corrugated UV-Stabilized Polypropylene	24 lb/1000 sf (11.7 kg/100 sm)
Thread	Polypropylene, UV Stable	

Standard Roll Sizes

Property	5A/5B	5C
Width	6.5 ft (2.0 m)	8 ft (2.44m)
Length	55.5 ft (16.9 m)	68 ft (20.7 m)
Weight ± 10%	52 lbs (23.59 kg)	78 lbs (35.4 kg)
Area	40 sy (33.4 sm)	60 sq. yd. (50.2 sm)



Index Property	Test Method	Typical
Thickness	ASTM D6525	0.63 in. (16 mm)
Resiliency	ASTM 6524	95%
Density	ASTM D792	0.91 g/cm ³
Mass/Unit Area	ASTM 6566	21.0 oz/sy (712 g/sm)
UV Stability	ASTM D4355/1000 HR	90%
Porosity	ECTC Guidelines	96%
Light Penetration	ASTM D6567	10%
Tensile Strength - MD	ASTM D6818	1050 lbs/ft (15.5 kN/m)
Elongation - MD	ASTM D6818	25%
Tensile Strength - TD	ASTM D6818	1050 lbs/ft (15.5 kN/m)
Elongation - TD	ASTM D6818	20%
Biomass Improvement	ASTM D7322	400%

Design Permissible Shear Stress

	Short Duration	Long Duration
Phase 1: Unvegetated	4.0 psf (191 Pa)	3.3 psf (156 Pa)
Phase 2: Partially Veg.	12 psf (576 Pa)	10 psf (576 Pa)
Phase 3: Fully Veg.	16 psf (766 Pa)	12 psf (576 Pa)
Unvegetated Velocity	12 fps (3.8 m/s)	10 fps (3.1 m/s)
Vegetated Velocity	25 fps (7.6 m/s)	22 fps (6.7 m/s)

NTPEP ASTM D6460 Large Scale Channel

Vegetated Shear Stress	>13.2 psf (632 Pa)
Vegetated Velocity	>24.5 fps (7.47 m/s)

Slope Design Data: C Factors

Slope Length (L)	Slope Gradients (S)		
	≤ 3:1	3:1 - 2:1	≥ 2:1
≤ 20 ft (6 m)	0.0005	0.015	0.043
20-50 ft	0.0173	0.031	0.050
≥ 50 ft (15.2 m)	0.035	0.047	0.057

Roughness Coefficients - Unveg.

Manning's n
τ_{upper} : 0.023
τ_{mid} : 0.026
τ_{lower} : 0.029



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