



PERFORMANCE SPECIFICATION



P550

The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 100% UV stabilized polypropylene fiber matrix incorporated into a permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between the bottom and middle ultra heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings and then 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, dramatically corrugated (crimped) netting shall form prominent closely spaced ridges across the entire width of the mat. The three nets shall be stitched together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread to form a permanent three-dimensional turf reinforcement matting.

Slope Design Data - Unvegetated Cover Factors

Slope Length (L)	Slope Gradient (S)		
	≤ 3:1	3:1-2:1	≥ 2:1
≤ 20 ft (6 m)	0.00045	0.0145	0.0425
20 - 50 ft	0.0173	0.0305	0.0495
≥ 50 ft (15.2 m)	0.0345	0.0465	0.0565

Channel Design Data

Roughness Coefficients - Unvegetated	
Flow Depth	Manning's 'n'
≤ 0.50 ft (0.15 m)	0.041
0.50 - 2.00 ft	0.040 - 0.014
≥ 2.00 ft (0.60 m)	0.013

	Maximum Permissible Shear Stress	
	Short Duration	Long Duration
Phase 1 UNVEGETATED	4.0 lbs/ft² (191 Pa)	3.25 lbs/ft² (156 Pa)
Phase 2 PARTIALLY VEGETATED	12.0 lbs/ft² (576 Pa)	12.0 lbs/ft² (576 Pa)
Phase 3 FULLY VEGETATED	14.0 lbs/ft² (672 Pa)	12.0 lbs/ft² (576 Pa)

<u>Approximate Maximum Flow Velocity</u>
Unvegetated = 12.5 ft/s (3.8 m/s)
Vegetated = 25 ft/s (7.6 m/s)

Values are approximate, precise values can be obtained using ECMDS™

*Performance values obtained through third party testing at the Texas Transportation Institute, Colorado State University, and Utah State University based on soil loss failure criteria not exceeding 0.50 inches (1.27 cm).