



## PERFORMANCE SPECIFICATION



# C350

The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 100% coconut fiber matrix incorporated into a permanent three-dimensional turf reinforcement matting.

The matrix shall be stitch bonded between a super heavy duty UV stabilized bottom net with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, a ultra duty UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, and covered by a super heavy duty UV stabilized top net with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The 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 (3.81 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)	0.0005	0.015	0.043
20 - 50 ft	0.018	0.031	0.050
≥ 50 ft (15.2 m)	0.035	0.047	0.057

### Channel Design Data

Roughness Coefficients - Unvegetated	
Flow Depth	Manning's 'n'
≤ 0.50 ft (0.15 m)	0.041
0.50 - 2.00 ft	0.040-0.013
≥ 2.00 ft (0.60 m)	0.012

Approximate Maximum Flow Velocity
Unvegetated = 10.5 ft/s (3.20 m/s)
Vegetated = 20 ft/s (6.0 m/s)

Maximum Permissible Shear Stress*		
	Short Duration	Long Duration
Phase 1 UNVEGETATED	3.20 lbs/ft <sup>2</sup> (153 Pa)	3.00 lbs/ft <sup>2</sup> (144 Pa)
Phase 2 PARTIALLY VEGETATED	10.00 lbs/ft <sup>2</sup> (480 Pa)	10.00 lbs/ft <sup>2</sup> (480 Pa)
Phase 3 FULLY VEGETATED	12.00 lbs/ft <sup>2</sup> (576 Pa)	10.00 lbs/ft <sup>2</sup> (480 Pa)

Values are approximate, precise values obtained from ECMDSTM

\*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).