

SUPPLEMENTAL SPECIFICATION

TRM 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 netting structure.

The matrix shall be stitch bonded between a heavy-duty UV stabilized bottom net with 1.27 x 1.27 cm openings, a heavy duty UV stabilized, dramatically cusped (crimped) intermediate netting with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, and a super heavy duty UV stabilized top net with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The cusped 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 structure.

Property	Test Method	Typical	MARV*
Thickness	ASTM D5199/ECTC	16.80 mm	16.00 mm
Resiliency	ASTM D1777	90%	88%
Density	ASTM D792	0.890 g/cm ³	0.889 g/cm ³
Mass per Unit Area	ASTM D5261	446 g/m ²	382 g/m ²
Porosity	ECTC Guidelines	97.05%	96.53%
Open Volume per Unit Area	ECTC Guidelines	16,402 cm ³ /m ²	15,374 cm ³ /m ²
Light Penetration	ECTC Guidelines	5.50%	4.70%
MD Tensile Strength	ASTM D5035	9.60 kN/m	6.83 kN/m
MD Elongation	ASTM D5035	13.40%	17.80%
TD Tensile Strength	ASTM D5035	13.28 kN/m	10.83 kN/m
TD Elongation	ASTM D5035	10.90%	12.10%
Tensile Strength at 10% Elongation			
MD Tensile Strength	ASTM D5035	4.89 kN/m	3.38 kN/m
TD Tensile Strength	ASTM D5035	8.69 kN/m	7.12 kN/m
C350 PERMANENT NET STRUCTURE ONLY			
UV Stability	ASTM D4355**	86%	N/A

*Minimum average roll values (MARV) are calculated as the typical plus or minus two standard deviations.

Statistically, this yields a 97.7 % degree of confidence that any samples taken will exceed the value reported. 'Typical' indicates the mean or average.

**ASTM D1682 (4 inch strip) Tensile Strength and % Strength Retention of material following 1000 hrs exposure in Xenon-Arc Weatherometer.

MD – Machine direction TD – Transverse direction

PERFORMANCE SPECIFICATION

Table 1: Cover Factors

Slope	Slope Gradient, s (h: v)		
	<3:1	3:1 to 2:1	>2:1
Length (L)			
<6m	0.0005	0.015	0.043
6m to 15m	0.018	0.031	0.05
>15m	0.035	0.047	0.057

Table 2: Roughness Coefficient

Flow Depth	Manning's "n"
<0.15m	0.049 – 0.040
0.15m to 0.6m	0.040 – 0.020
>0.6m	0.020

Table 3 Maximum Permissible Shear Stress

	Short Duration* ¹	Long Duration* ²
Phase 1: Un-vegetated stage	153 Pa	108 Pa
Phase 2: Partially vegetated stage	288 Pa	216 Pa
Phase 3: Fully vegetated stage	384 Pa	384 Pa

Note: *1. Less than 2 hours critical flow

*2. More than 2 hours critical flow

Table 4: Limiting Flow Velocities

Limiting flow velocities where soil loss rate is less than 0.5 inch:

	Flow Velocities	Flow Duration
Phase 1: Un-vegetated stage	3 m/sec	0.5 hours
Phase 2: Partially vegetated stage	N/a	N/a
Phase 3: Fully vegetated stage	5.5 m/sec	60 hours