SUPPLEMENTAL 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 heavy 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.

Property	Test Method	Typical	
Thickness	ASTM D6525	0.67 in (17 mm)	
Resiliency	ASTM D1777	90%	
Density	ASTM D792	0.528 oz/in^3 (0.913 g/cm^3)	
Mass per Unit Area	ASTM D6566	12.57 yd^2 (426 g/m^2)	
Porosity	ECTC Guidelines	99%	
Stiffness	ASTM D1388/ECTC	3.83 oz-in (42,710 mg-cm)	
Light Penetration	ECTC Guidelines	9.0%	
MD Tensile Strength	ASTM D6818 [D5035]	625 lbs/ft (9.12 kN/m)	[658 lbs/ft (9.60 kN/m)]
MD Elongation	ASTM D6818 [D5035]	22%	[8.50%]
TD Tensile Strength	ASTM D6818 [D5035]	768 lbs/ft (11.21 kN/m)	[910 lbs/ft (13.28 kN/m)]
TD Elongation	ASTM D6818 [D5035]	15%	[10.90%]

C350 PERMANENT TURF REINFORCMENT MATTING ONLY

Property	Test Method	Typical
Thickness	ASTM D6525	0.51 in (13 mm)
UV Stability	ASTM D4355*	86%
MD Tensile Strength	ASTM D6818 [D5035]	698 lbs/ft (10.19 kN/m) [564 lbs/ft (8.23 kN/m)]
MD Elongation	ASTM D6818 [D5035]	30% [37%]
TD Tensile Strength	ASTM D6818 [D5035]	710 lbs/ft (10.36 kN/m) [780 lbs/ft (11.38)]
TD Elongation	ASTM D6818 [D5035]	20%

*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

Bench Scale Testing†

Test Method - Description	Parameters	Results
ECTC Method 2 – Determination of unvegetated RECP's ability to protect soil from rain splash and associated runoff	50 mm (2 in)/hr for 30 min	Soil loss ratio* = 18.32
	100 mm (4 in)/hr for 30 min	Soil loss ratio* = 19.65
	150 mm (6 in)/hr for 30 min	Soil loss ratio* = 20.48
ECTC Method 3 – Determination of unvegetated RECP's ability to protect soil from hydraulically-induced shear stress. **Failure criteria = 0.50 inch soil loss**	Shear: 4.72 lbs/ft^2 for 30 min	Soil loss: 127g
	Shear: 5.74 lbs/ft^2 for 30 min	Soil loss: 195g
	Shear: 5.91 lbs/ft^2 for 30 min	Soil loss: 255g
	Shear at 0.50 inch soil loss (450g)	**7.5 lbs/ft^2**
ECTC Draft Method 4 – Determination of temporary RECP performance in encouraging seed germination and plant growth	Top soil; Fescue (Kentucky 31); 21 day incubation 27° C ± 2° & approximately 50% RH	Percent improvement = 243% (increased biomass)
* Soil Loss Ratio = Soil Loss with Bare Soil / Soil Loss with RECP (NOTE: Soil loss based on regression analysis)		

†Bench Scale Performance Testing

Bench scale tests are index property tests. These tests are not indicative of field performance and therefore should not be used in design to establish performance levels for rolled erosion control products. Bench scale tests are performed according to methods developed by the Erosion Control Technology Council (ECTC).

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