



**Material and Performance Specification**

**ECC-3 Coconut Turf Reinforcement Mat**

**Description:** The ECC-3 is made with uniformly distributed 100% coconut fiber and three polypropylene nets securely sewn together with UV stabilized thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation.  
The ECC-3 is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels.

**Materials:**

	<b>Netting – Top and Bottom</b>	<b>Matrix</b>	<b>Thread</b>
	Mediumweight 8# PMSF UV Stabilized Polypropylene 0.50" x 0.50" Opening <i>Middle Net</i>	100% Coconut Fiber 0.55 lbs yd <sup>2</sup> 298.4 g/m <sup>2</sup>	UV Stabilized 1.50" stitch spacing
	Heavyweight 24# PMSF UV Stabilized Polypropylene 0.40" x 0.50" Opening		

**Roll Sizes:**

	<b>Standard</b>	<b>Mega</b>
Width:	7.5 ft (2.3 m)	15.0 ft (4.6m)
Length:	120.0 ft (36.6 m)	120.0 ft (36.6 m)
Weight ±10%:	92.5 lbs (42.0 kg)	185.0 lbs (83.9 kg)
Area:	100 yd <sup>2</sup> (83.6 m <sup>2</sup> )	200 yd <sup>2</sup> (167.2 m <sup>2</sup> )
#/Pallet:	9	

**Index Value Properties\*:**

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	14.8 oz/yd <sup>2</sup> (501.8 g/m <sup>2</sup> )
Thickness	ASTM D6525	.43 in (10.9 mm)
Tensile Strength-MD	ASTM D6818	802 lb/ft (11.7 kN/m)
Elongation-MD	ASTM D6818	24.7 %
Tensile Strength-TD	ASTM D6818	790 lb/ft (11.5 kN/m)
Elongation-TD	ASTM D6818	15.7 %
Light Penetration	ASTM D6567	13.5 %
Water Absorption	ASTM D1117	113 %
UV Resistance	ASTM D4355-500 hr	80 %
* May differ depending upon raw material variations		

**Bench-Scale Testing\* (NTEP\*\*\*):**

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50mm (2in) / hr-30 min	SLR**=6.89
	100mm (4in) / hr-30 min	SLR**=11.32
	150mm (6in) / hr-30 min	SLR**=18.60
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	3.71 lb/ft <sup>2</sup>
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	335% improvement
*Bench scale tests should not be used for design purposes.		
**Soil Loss Ratio=Soil Loss Bare Soil/Soil Loss with RECP=1/C-Factor		
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**Slope Performance Design Values\*:**

Property	Test Method	Value	
Manning's N		0.024	
<b>C-Factors</b>	ASTM D6459		
<b>Slope Length (L)</b>	<b>≤ 3:1</b>	<b>3:1-2:1</b>	<b>≥ 2:1</b>
< 50 ft (15 m)	0.001	0.007	0.047
50 ft – 100 ft	0.008	0.015	0.069
>100 ft (30 m)	0.027	0.050	0.089
*Large-Scale Results obtained by 3 <sup>rd</sup> Party GAI Accredited Independent Laboratory			

**Channel Performance Design Values\*:**

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	3.70 lbs/ft <sup>2</sup> (177 Pa)
Unvegetated Velocity	ASTM D 6460	13.8 ft/s ( 4.2 m/s)
Vegetated Shear Stress	ASTM D 6460	12.0 lbs/ft <sup>2</sup> (574 Pa)
Vegetated Velocity	ASTM D 6460	25.0 ft/s ( 7.6 m/s)
*Large-Scale Results obtained by 3 <sup>rd</sup> Party GAI Accredited Independent Laboratory		

