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## 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.

Matrix:	1	2
	100% Coconut	

Netting:	Type	Net Color
Top:	Medium weight 8# PMSF UV Stabilized Polypropylene	Black
Middle:	Heavyweight 24# PMSF UV Stabilized Polypropylene	
Bottom:	Medium weight 8# PMSF UV Stabilized Polypropylene	

Net Opening:	Top	Middle	Bottom
	0.5" x 0.5"	0.4" x 0.5"	0.5" x 0.5"

Thread:	Type	Color
	UV Stabilized Thread	

Roll Sizes:	Standard		"A" Size		Mega	
Width:	8 ft	2.4 m	4 ft	1.2 m	16 ft	4.9 m
Length:	112.5 ft	34.3 m	225 ft	68.6 m	112.5 ft	34.3 m
Weight:*	92 lbs	41.7 kg	92 lbs	41.7 kg	184 lbs	83.5 kg
Area:	100 yd <sup>2</sup>	83.6 m <sup>2</sup>	100 yd <sup>2</sup>	83.6 m <sup>2</sup>	200 yd <sup>2</sup>	167.2 m <sup>2</sup>
#/Pallet:	9		4		9	

\*Weight at time of manufacturing within specified tolerances.

#### Index Value Properties\*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6566	13.25 oz/yd <sup>2</sup>	449.2 g/m <sup>2</sup>
Thickness	ASTM D6525	0.34 in	8.64 mm
Tensile Strength-MD	ASTM D6818	802 lb/ft	11.70 kN/m
Elongation-MD	ASTM D6818	25 %	
Tensile Strength-TD	ASTM D6818	643 lb/ft	9.38 kN/m
Elongation-TD	ASTM D6818	15.7 %	
Light Penetration	ASTM D6567	14 %	
Density / Specific Gravity	ASTM D792	0.888 g/cm <sup>3</sup>	
Water Absorption	ASTM D1117	113 %	
Resiliency	ASTM D6524	N/A %	
UV Resistance	ASTM D4355	98 %	1000 hours

\*May differ depending upon raw material variations

#### Bench-Scale Testing\* (NTPEP\*\*\*):

Test Method	Parameters	Results
	50mm (2in) / hr-30 min	SLR**=7.70
ECTC Method 2 Rainfall	100mm (4in) / hr-30 min	SLR**=10.43
	150mm (6in) / hr-30 min	SLR**=14.18
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	3.13 lb/ft <sup>2</sup>
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	364 %

\*Bench scale tests should not be used for design purposes.

\*\*Soil Loss Ratio=Soil Loss Bare Soil/Soil Loss with RECP=1/C-Factor

\*\*\*The preceding test data excerpts were reproduced with the permission of AASHTO, however, this does not constitute endorsement or approval of the product, material or device by AASHTO

#### Slope Performance Design Values\*:

Property	Test Method	Value	
<b>C-Factors</b>	ASTM D6459	0.00	
<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	3.20	lbs/ft <sup>2</sup>	153.22 Pa
Unvegetated Velocity	ASTM D 6460	11.5	ft/s	3.51 m/s
Vegetated Shear Stress	ASTM D 6460	12.0	lbs/ft <sup>2</sup>	574.56 Pa
Vegetated Velocity	ASTM D 6460	25.0	ft/s	7.62 m/s
Manning's N (Value Represents a Range)		0.024		

\*Large-Scale Results obtained by 3<sup>rd</sup> Party GAI Accredited Independent Laboratory

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