



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

Roll Sizes:	Standard	Mega
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%:	92.0 lbs (41.7 kg)	184.0 lbs (83.4 kg)
Area:	100 yd ² (83.6 m ²)	200 yd ² (167.2 m ²)
#/Pallet:	9	

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	14.8 oz/yd ² (501.8 g/m ²)
Thickness	ASTM D6525	.34 in (8.6 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	14 %
Water Absorption	ASTM D1117	113 %
Density/Specific Gravity	ASTM D792	0.888 gm/cm ³
UV Resistance	ASTM D4355	98 % (1,000 Hr - Net Only)

* May differ depending upon raw material variations

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

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 ²
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
C-Factors	ASTM D6459	
Slope Length (L)	≤ 3:1	3:1-2:1
< 50 ft (15 m)	0.001	0.007
50 ft – 100 ft	0.008	0.015
>100 ft (30 m)	0.027	0.050

*Large-Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

Channel Performance Design Values*:

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	3.70 lbs/ft ² (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 ² (574 Pa)
Vegetated Velocity	ASTM D 6460	25.0 ft/s (7.6 m/s)

*Large-Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

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