



Material and Performance Specification

ECSC-3 Straw/Coconut Turf Reinforcement Mat

Description: The ECSC-3 is made with uniformly distributed 70% agricultural straw, 30% 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 ECSC-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	70% Agricultural Straw 0.385 lbs yd ² 208.9 g/m ²	UV Stabilized 1.50" stitch spacing
	Heavyweight 24# PMSF UV Stabilized Polypropylene 0.40" x 0.50" Opening	30% Coconut Fiber 0.165 lbs yd ² 89.5 g/m ²	

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

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	16.0 oz/yd ² (542.5g/m ²)
Thickness	ASTM D6525	.39 in (9.9 mm)
Tensile Strength-MD	ASTM D6818	652 lb/ft (9.5 kN/m)
Elongation-MD	ASTM D6818	20.7 %
Tensile Strength-TD	ASTM D6818	767 lb/ft (11.2 kN/m)
Elongation-TD	ASTM D6818	20.8 %
Light Penetration	ASTM D6567	7 %
UV Resistance	ASTM D4355-500hr	80 %
Density	ASTM D7912	0.919 g/cm ³

* 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**=18.16
	100mm (4in) / hr-30 min	SLR**=17.83
	150mm (6in) / hr-30 min	SLR**=17.50
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.63 lb/ft ²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	497% 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	≥ 2:1
< 50 ft (15 m)	0.006	0.012	0.072
50 ft – 100 ft	0.026	0.042	0.086
>100 ft (30 m)	0.062	0.082	0.132

*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	2.79 lbs/ft ² (134 Pa)
Unvegetated Velocity	ASTM D 6460	11 ft/s (3.4 m/s)
Vegetated Shear Stress	ASTM D 6460	10.0 lbs/ft ² (478 Pa)
Vegetated Velocity	ASTM D 6460	20.0 ft/s (6.1 m/s)

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

