



Material and Performance Specification

ECP-2 Polypropylene Turf Reinforcement Mat

Description: The ECP-2 is made with uniformly distributed 100% green polypropylene fiber and two mediumweight 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 ECP-2 is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels. The ECP-2 meets Type 5.A, 5.B, and 5.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18.

Materials:

	Netting – Top, and Bottom	Matrix	Thread
	Mediumweight 5# PMSF UV Stabilized Polypropylene 0.50" x 0.50" Opening	100% Green Polypropylene Fiber 0.75 lbs yd ² 406.9 g/m ²	UV Stabilized 1.50" stitch spacing

Roll Size:

	Standard	Mega
Width:	7.5 ft (2.3 m)	15.0 ft (4.6 m)
Length:	120.0 ft (36.6 m)	120.0 ft (36.6 m)
Weight ±10%:	81.0 lbs (36.7 kg)	162.0 lbs (73.5 kg)
Area:	100 yd ² (83.6 m ²)	200 yd ² (167.2 m ²)
#/Pallet:	9/12	9/12

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6566	13.5 oz/yd ² (382.7 g/m ²)
Thickness	ASTM D6525	.34 in (8.6 mm)
Tensile Strength-MD	ASTM D6818	356 lb/ft (5.2 kN/m)
Elongation-MD	ASTM D6818	30.5 %
Tensile Strength-TD	ASTM D6818	461 lb/ft (6.7 kN/m)
Elongation-TD	ASTM D6818	19 %
Light Penetration	ASTM D6567	25 %
Density	ASTM D7912	0.915 %
UV Resistance	ASTM D4355-1000hr	82 %

* 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**=4.70
	100mm (4in) / hr-30 min	SLR**=8.49
	150mm (6in) / hr-30 min	SLR**=15.34
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.92 lb/ft ²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	651% 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		0.028	
C-Factors	ASTM D6459		
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1
< 50 ft (15 m)	0.012	0.025	0.092
50 ft – 100 ft	0.036	0.065	0.115
>100 ft (30 m)	0.080	0.108	0.145

*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	2.25 lbs/ft ² (108 Pa)
Unvegetated Velocity	ASTM D 6460	9.1 ft/s (2.8 m/s)
Vegetated Shear Stress	ASTM D 6460	12.0 lbs/ft ² (574 Pa)
Vegetated Velocity	ASTM D 6460	18.0 ft/s (5.5 m/s)

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

