



**Material and Performance Specification**

**ECP-2 10 oz Polypropylene Turf Reinforcement Mat**

**Description:** The ECP-2 10 oz. 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 10 oz. is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels. The ECP-2 10 oz. meets Type 5.A, 5.B specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18.

**Materials:**

	<b>Netting – Top, and Bottom</b>	<b>Matrix</b>	<b>Thread</b>
	Mediumweight 5# PMSF UV Stabilized Polypropylene 0.50" x 0.50" Opening	100% Green Polypropylene Fiber 0.63 lbs yd <sup>2</sup> 341.8 g/m <sup>2</sup>	UV Stabilized 1.50" stitch spacing

**Roll Sizes:**

	<b>Standard</b>	<b>Mega</b>
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%:	63.0 lbs (36.7 kg)	126.0 lbs(57.1 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:	16	16

**Index Value Properties\*:**

Property	Test Method	Typical
Mass/Unit Area	ASTM D6566	10.4 oz/yd <sup>2</sup> 352.6g/m <sup>2</sup>
Thickness	ASTM D6525	.45 in (11.4 mm)
Tensile Strength-MD	ASTM D6818	380 lb/ft (5.5kN/m)
Elongation-MD	ASTM D6818	23.5 %
Tensile Strength-TD	ASTM D6818	289 lb/ft (4.2 kN/m)
Elongation-TD	ASTM D6818	20.0 %
Light Penetration	ASTM D6567	14 %
Density	ASTM D7912	0.92 g/cm <sup>3</sup>
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**=4.58
	100mm (4in) / hr-30 min	SLR**=8.80
	150mm (6in) / hr-30 min	SLR**=16.92
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.42 lb/ft <sup>2</sup>
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	482% 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  
 \*\*\*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	
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)	0.009	0.019	0.062
50 ft – 100 ft	0.025	0.044	0.077
>100 ft (30 m)	0.053	0.072	0.096

\*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	2.15 lbs/ft <sup>2</sup> (100 Pa)
Unvegetated Velocity	ASTM D 6460	8.0 ft/s ( 2.4 m/s)
Vegetated Shear Stress	ASTM D 6460	8.0 lbs/ft <sup>2</sup> (384 Pa)
Vegetated Velocity	ASTM D 6460	16.0 ft/s ( 4.9 m/s)

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

