



Material and Performance Specification

ECP-3 Polypropylene Turf Reinforcement Mat

Description: The ECP-3 is made with uniformly distributed 100% green polypropylene fiber and three heavyweight 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-3 is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels. The ECP-3 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, Middle and Bottom	Matrix	Thread
Heavyweight 24# PMSF UV Stabilized Polypropylene 0.40" x 0.50" Opening	100% 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%:	137.5 lbs (62.8 kg)	275.0 lbs (124.7 kg)
Area:	100 yd ² (83.6 m ²)	200 yd ² (167.2 m ²)
#/Pallet:	4/6	6

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6566	19.9 oz/yd ² (674.6 g/m ²)
Thickness	ASTM D6525	.41 in (10.4 mm)
Tensile Strength-MD	ASTM D6818	1,436 lb/ft (21.0 kN/m)
Elongation-MD	ASTM D6818	29.3 %
Tensile Strength-TD	ASTM D6818	1,428 lb/ft (20.8 kN/m)
Elongation-TD	ASTM D6818	19.0 %
Light Penetration	ASTM D6567	13 %
Density	ASTM D7912	0.913 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**=7.68
	100mm (4in) / hr-30 min	SLR**=10.42
	150mm (6in) / hr-30 min	SLR**=14.15
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	3.51 lb/ft ²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	426% 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)	0.0003	0.001	0.022
50 ft – 100 ft	0.005	0.009	0.029
>100 ft (30 m)	0.016	0.025	0.036
*Large-Scale Results obtained by 3 rd Party GAI Accredited Independent Laboratory			

Channel Performance Design Values*:

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	5.0 lbs/ft ² (239 Pa)
Unvegetated Velocity	ASTM D 6460	15.0 ft/s (4.6 m/s)
Vegetated Shear Stress	ASTM D 6460	14.0 lbs/ft ² (670 Pa)
Vegetated Velocity	ASTM D 6460	25.0 ft/s (7.6 m/s)
*Large-Scale Results obtained by 3 rd Party GAI Accredited Independent Laboratory		



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