

Material and Performance Specification

ECP-2 10 oz.TM Polypropylene Turf Reinforcement Mat

Description:

The ECP-2 10 oz.TM is made with uniformly distributed 100% polypropylene fiber and two medium weight polypropylene nets securely sewogether 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.TM is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels. The ECP-2 10 oz.TM 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.

Matrix:	1	2
	Green or Tan Polypropylene Fiber	

Netting:	Type	Net Color
	Top: Medium weight 5# PMSF UV Stabilized Polypropylene	Black
	Middle: None	
	Bottom: Medium weight 5# PMSF UV Stabilized Polypropylene	

Net Opening:	Top	Middle	Bottom
	0.5" x 0.5"		0.5" x 0.5"

Thread:	Type	Color
	UV Stabilized Thread	Black

Roll Sizes:	Standard		"A" Size		Mega	
Width:	8 ft	2.4 m	4 ft	1.2 m	16 ft	4.9 m
Length:	112.5 ft	34.3 m	225 ft	68.6 m	112.5 ft	34.3 m
Weight:*	62 lbs	28.1 kg	62 lbs	28.1 kg	124 lbs	56.2 kg
Area:	100 yd ²	83.6 m ²	100 yd ²	83.6 m ²	200 yd ²	167.2 m ²
#/Pallet:	16		9		16	

*Weight at time of manufacturing within specified tolerance:

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6566	10.00 oz/yd ²	339.1 g/m ²
Thickness	ASTM D6525	0.40 in	10.16 mm
Tensile Strength-MD	ASTM D6818	370 lb/ft	5.40 kN/m
Elongation-MD	ASTM D6818	24 %	
Tensile Strength-TD	ASTM D6818	315 lb/ft	4.60 kN/m
Elongation-TD	ASTM D6818	20.0 %	
Light Penetration	ASTM D6567	25 %	
Density / Specific Gravity	ASTM D792	0.917 g/cm ³	
Water Absorption	ASTM D1117	0 %	
Resiliency	ASTM D6524	80 %	
UV Resistance	ASTM D4355	82 %	1000 hours

*May differ depending upon raw material variations

Slope Performance Design Values*:

Property	Test Method	Value	
C-Factors	ASTM D6459	0.01	
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1
< 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 3rd Party GAI Accredited Independent Laboratory

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

Test Method	Parameters	Results
	50mm (2in) / hr-30 min	SLR**=4.58
ECTC Method 2 Rainfall	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/ft²

ECTC Method 4 Germination Top soil; Fescue; 21 day incubation 482 %

*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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Channel Performance Design Values*:

Property	Test Method	Value		
Unvegetated Shear Stress	ASTM D 6460	2.30 lbs/ft ²	110.12 Pa	
Unvegetated Velocity	ASTM D 6460	9.0 ft/s	2.74 m/s	
Vegetated Shear Stress	ASTM D 6460	10.0 lbs/ft ²	478.80 Pa	
Vegetated Velocity	ASTM D 6460	18.0 ft/s	5.49 m/s	
Manning's N (Value Represents a Range)		0.024		

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