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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 medium weight 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.

Matrix:	1		2
	Green or Tan Polypropylene Fiber		N/A

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"	N/A	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:*	75 lbs	34.0 kg	75 lbs	34.0 kg	150 lbs	68.0 kg
Area:	100 yd²	83.6 m²	100 yd²	83.6 m²	200 yd²	167.2 m²
#/Pallet:	9		6		9	

*Weight at time of manufacturing within specified tolerances.

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6566	12.00 oz/yd²	406.9 g/m2
Thickness	ASTM D6525	0.40 in	10.16 mm
Tensile Strength-MD	ASTM D6818	400 lb/ft	5.84 kN/m
Elongation-MD	ASTM D6818	31 %	
Tensile Strength-TD	ASTM D6818	400 lb/ft	5.84 kN/m
Elongation-TD	ASTM D6818	19.0 %	
Light Penetration	ASTM D6567	18 %	
Density / Specific Gravity	ASTM D792	0.915 g/cm³	
Water Absorption	ASTM D1117	0 %	
Resiliency	ASTM D6524	80 %	
UV Resistance	ASTM D4355	82 %	1000 hours

*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**=5.53
	100mm (4in) / hr-30 min	SLR**=5.38
	150mm (6in) / hr-30 min	SLR**=5.22
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.72 lb/ft²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	469 %

*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	
C-Factors	ASTM D6459		0.01	
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	2.60	lbs/ft²	124.49	Pa
Unvegetated Velocity	ASTM D 6460	10.0	ft/s	3.05	m/s
Vegetated Shear Stress	ASTM D 6460	12.0	lbs/ft²	574.56	Pa
Vegetated Velocity	ASTM D 6460	20.0	ft/s	6.10	m/s
Manning's N (Value Represents a Range)		0.028			

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

Revised1/1/2017

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IVI-EC-3321-1117-C146