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Material and Performance Specification

ECC-3™ Coconut Turf Reinforcement Mat

Description:

The ECC-3™ is made with uniformly distributed 100% coconut fiber and three 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 ECC-3™ is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels.

Matrix:	1	2
	100% Coconut	

Netting:	Type	Net Color
Top:	Medium weight 8# PMSF UV Stabilized Polypropylene	Black
Middle:	Heavyweight 24# PMSF UV Stabilized Polypropylene	
Bottom:	Medium weight 8# PMSF UV Stabilized Polypropylene	

Net Opening:	Top	Middle	Bottom
	0.5" x 0.5"	0.4" x 0.5"	0.5" x 0.5"

Thread:	Type	Color
	UV Stabilized Thread	

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:*	92 lbs 41.7 kg	92 lbs 41.7 kg	184 lbs 83.5 kg
Area:	100 yd^2 83.6 m^2	100 yd^2 83.6 m^2	200 yd^2 167.2 m^2
#/Pallet:	9	4	9

*Weight at time of manufacturing within specified tolerances.

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6566	13.25 oz/yd^2	449.2 $g/m2$
Thickness	ASTM D6525	0.34 in	8.64 mm
Tensile Strength-MD	ASTM D6818	802 lb/ft	11.70 kN/m
Elongation-MD	ASTM D6818	25 %	
Tensile Strength-TD	ASTM D6818	643 lb/ft	9.38 kN/m
Elongation-TD	ASTM D6818	15.7 %	
Light Penetration	ASTM D6567	14 %	
Density / Specific Gravity	ASTM D792	0.888 g/cm^3	
Water Absorption	ASTM D1117	113 %	
Resiliency	ASTM D6524	N/A %	
UV Resistance	ASTM D4355	98 %	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**=7.70
	100mm (4in) / hr-30 min	SLR**=10.43
	150mm (6in) / hr-30 min	SLR**=14.18
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	3.13 lb/ft^2
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	364 %

*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		0.00
Slope Length (L)	**≤ 3:1**	**3:1-2:1**	**≥ 2:1**
< 50 ft (15 m)	0.001	0.007	0.047
50 ft – 100 ft	0.008	0.015	0.069
>100 ft (30 m)	0.027	0.050	0.089

*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	3.20	lbs/ft^2	153.22	Pa
Unvegetated Velocity	ASTM D 6460	11.5	ft/s	3.51	m/s
Vegetated Shear Stress	ASTM D 6460	12.0	lbs/ft^2	574.56	Pa
Vegetated Velocity	ASTM D 6460	25.0	ft/s	7.62	m/s
Manning's N (Value Represents a Range)		0.024			

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

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