

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 stabled 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 Polypropylen	Black	
	Middle: Heavyweight 24# PMSF UV Stabilized Polypropylene		
	Bottom: Medium weight 8# PMSF UV Stabilized Polypropylen		
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 tolerance:

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6566	13.25 oz/yd ²	449.2 g/m ²
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

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

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

Test Method	Parameters	Results
	50mm (2in) / hr-30 min	SLR**=7.70
ECTC Method 2 Rainfall	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/ft²

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

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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