

Material and Performance Specification

ECSC-2™ Double Net Straw/Coconut Rolled Erosion Control Product

Description:

The ECSC-2™ is made with uniformly distributed 70% agricultural straw, 30% coconut fiber and two polypropylene nets securely sewn tother with degradable thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation. The ECSC-2™ has functional longevity of approximately 24 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 to 1:1 and low to medium flow channels. The ECSC-2™ meets Type 3.B specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

Matrix:	1	2
	70% Straw	30% Coconut

Netting:	Type	Net Color
Top:	Lightweight Photodegradable Polypropyler	Green
Middle:	None	
Bottom:	Medium weight UV Stabilized Polypropylen	

Net Opening:	Top	Middle	Bottom
	0.5" x 0.5"		0.75" x 0.75"

Thread:	Type	Color
	Degradable Threac	White

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*:	57 lbs	25.9 kg	57 lbs	25.9 kg	114 lbs	51.7 kg
Area:	100 yd ²	83.6 m ²	100 yd ²	83.6 m ²	200 yd ²	167.2 m ²
#/Pallet:	25		9		25	

*Weight at time of manufacturing

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6475	8.00 oz/yd ²	271.2 g/m ²
Thickness	ASTM D6525	0.30 in	7.62 mm
Tensile Strength-MD	ASTM D6818	178 lb/ft	2.60 kN/m
Elongation-MD	ASTM D6818	31 %	
Tensile Strength-TD	ASTM D6818	148 lb/ft	2.16 kN/m
Elongation-TD	ASTM D6818	22.4 %	
Light Penetration	ASTM D6567	13 %	
Density / Specific Gravity	ASTM D792	N/A g/cm ³	
Water Absorption	ASTM D1117	436 %	

*May differ depending upon raw material variations

Slope Performance Design Values*:

Property	Test Method	Value	
C-Factors	ASTM D6459	0.02	
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1
< 50 ft (15 m)	0.017	0.028	0.080
50 ft – 100 ft	0.031	0.059	0.125
>100 ft (30 m)	0.080	0.090	0.170

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

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

Test Method	Parameters	Results
	50mm (2in) / hr-30 min	SLR**=8.52
ECTC Method 2 Rainfall	100mm (4in) / hr-30 min	SLR**=11.01
	150mm (6in) / hr-30 min	SLR**=14.28
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.16 lb/ft ²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	503 %

*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	2.25	lbs/ft ²	107.73 Pa
Unvegetated Velocity	ASTM D 6460	8.0	ft/s	2.44 m/s
Vegetated Shear Stress	NA	N/A	lbs/ft ²	N/A Pa
Vegetated Velocity	NA	N/A	ft/s	N/A m/s
Manning's N (Value Represents a Range)		0.029		

*Large-Scale Results obtained by 2nd Party GAI Accredited Independent Laboratory