



**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 together 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.

Materials:	Netting	Matrix	Thread
	<i>Top</i>		
	Mediumweight Photodegradable Polypropylene 0.75" x 0.75" Opening	70% Agricultural Straw 0.385 lbs yd <sup>2</sup> 208.9 g/m <sup>2</sup>	Degradable 1.50" stitch spacing
	<i>Bottom</i>		
	Lightweight Photodegradable Polypropylene 0.50" x 0.50" Opening	30% Coconut Fiber 0.165 lbs yd <sup>2</sup> 89.5 g/m <sup>2</sup>	

Roll Sizes:	Standard	Mega
Width:	7.5 ft (2.3 m)	15.0 ft (4.6 m)
Length:	120.0 ft (36.6 m)	120.0 ft (36.6 m)
Weight ±10%:	60.0 lbs (27.2 kg)	120.0 lbs (54.4 kg)
Area:	100 yd <sup>2</sup> (83.6 m <sup>2</sup> )	200 yd <sup>2</sup> (167.2 m <sup>2</sup> )
#/Pallet:	16	16

**Index Value Properties\*:**

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	9.45 oz/yd <sup>2</sup> (320.4 g/m <sup>2</sup> )
Thickness	ASTM D6525	.40 in (10.2 mm)
Tensile Strength-MD	ASTM D6818	178 lb/ft (2.6 kN/m)
Elongation-MD	ASTM D6818	31.3 %
Tensile Strength-TD	ASTM D6818	148 lb/ft (2.2 kN/m)
Elongation-TD	ASTM D6818	22.4 %
Light Penetration	ASTM D6567	13 %
Water Absorption	ASTM D1117	339 %
* May differ depending upon raw material variations		

**Bench-Scale Testing\* (NTEP\*\*\*):**

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50mm (2in) / hr-30 min	SLR**=4.78
	100mm (4in) / hr-30 min	SLR**=8.03
	150mm (6in) / hr-30 min	SLR**=13.49
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.08 lb/ft <sup>2</sup>
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	214% improvement
*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	
Manning's N	Calculated	0.015	
<b>C-Factors</b> ASTM D6459			
<b>Slope Length (L)</b>	<b>≤ 3:1</b>	<b>3:1-2:1</b>	<b>≥ 2:1</b>
< 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 3 <sup>rd</sup> Party GAI Accredited Independent Laboratory			

**Channel Performance Design Values\*:**

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	2.60 lbs/ft <sup>2</sup> (125 Pa)
Unvegetated Velocity	ASTM D 6460	8.0 ft/s (2.4 m/s)
Vegetated Shear Stress	NA	NA
Vegetated Velocity	NA	NA
*Large-Scale Results obtained by 3 <sup>rd</sup> Party GAI Accredited Independent Laboratory		

