



Material and Performance Specification

ECS-1B Single Net Straw Biodegradable Rolled Erosion Control Product

Description: The ECS-1B is made with uniformly distributed 100% agricultural straw and one organic jute net securely sewn together with biodegradable thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation. The ECS-1B has functional longevity of approximately 12 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 3:1 or less and low flow channels. The ECS-1B meets Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration’s (FHWA) FP-03 Section 713.17.

Materials:

Netting – One Side Only	Matrix	Thread
Organic Leno Weave Jute 100% Biodegradable 0.5" x 1.0" Opening	100% Agricultural Straw 0.55 lbs/yd ² 298.4 g/m ²	Biodegradable 1.50" stitch spacing

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 \pm 10%:	66.2 lbs (30.0 kg)	132.4lbs (60.0kg)
Area:	100 yd ² (83.6 m ²)	200 yd ² (167.2 m ²)
#/Pallet:	16	16

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	11.9 oz/yd ² (403.5g/m ²)
Thickness	ASTM D6525	.48 in (12.2mm)
Tensile Strength-MD	ASTM D6818	106 lb/ft (1.8 kN/m)
Elongation-MD	ASTM D6818	16.7 %
Tensile Strength-TD	ASTM D6818	118 lb/ft (1.7 kN/m)
Elongation-TD	ASTM D6818	26.8 %
Light Penetration	ASTM D6567	6 %
Water Absorption	ASTM D1117	322 %

* 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**=10.62
	100mm (4in) / hr-30 min	SLR**=10.99
	150mm (6in) / hr-30 min	SLR**=11.37
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	1.40 lb/ft ²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	480% 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		0.025
C-Factors	ASTM D6459	
Slope Length (L)	≤ 3:1	3:1-2:1
< 50 ft (15 m)	0.075	NA
50 ft – 100 ft	0.156	NA
>100 ft (30 m)	0.236	NA

*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	1.55 lbs/ft ² (72Pa)
Unvegetated Velocity	ASTM D 6460	6.8 ft/s (2.0 m/s)
Vegetated Shear Stress	NA	NA
Vegetated Velocity	NA	NA

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



All Value Properties, Test Results and Design Values were derived from independent laboratory testing. East Coast Erosion Blankets, LLC will not be held liable for any type of damage or losses, directly, or indirectly for failure of this product. Current revision supersedes all previous versions.