

Material and Performance Specification Sheet

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

Description: The ECS-1B is made with uniformly distributed 100% agricultural straw and one 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. 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
	Leno Weave Jute 100% Biodegradable	100% Agricultural Straw 0.55 lbs/sq yd 298.4 g/m ²	Biodegradable 1.50" stitch spacing

Roll Sizes:		Standards
Width:	7.5 ft (2.3 m)	7.5 ft (2.3 m)
Length:	96.0 ft (29.3 m)	120.0 ft (36.6 m)
Weight +10%:	53.0 lbs(24.0 kg)	66.2 lbs (30.0 kg)
Area:	80 yd ² (66.9 m ²)	100 yd ² (83.6 m ²)
#/Pallet:	16	16

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	10.6 oz/yd ² (359.4 g/m ²)
Thickness	ASTM D5199	.31 In (7.9 mm)
Tensile Strength-MD	ASTM D5035	160 lb/ft (2.3 Kn/m)
Elongation-MD	ASTM D5035	4.7 %
Tensile Strength-TD	ASTM D5035	195 lb/ft (2.9 Kn/m)
Elongation-TD	ASTM D5035	5.1 %
Light Penetration	ECTC Guidelines	10 %
Water Absorption	ASTM D1117	453 %
* 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
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 (soil loss is based on regression analysis).		

Design Values:

Property	Value
Manning's N	.036
RUSLE C-Factor	.075
Maximum Permissible Sheer Stress	1.55 psf (74 Pa)