



Material and Performance Specification Sheet

ECS-1D Temporary Single Net Straw Rolled Erosion Control Product

Description: The ECS-1D is made with uniformly distributed 100% agricultural straw and one polypropylene net 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 ECS-1D has functional longevity of approximately 45 to 90 days, but will vary depending on soil and climatic conditions and is suitable for slopes 3:1 or less. The ECS-1D meets Type 1.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
	Accelerated Lightweight Photodegradable Polypropylene .5" x .5" Opening	100% Agricultural Straw 0.55 lbs/sq yd 298.4 g/m ²	Degradable 1.50" stitch spacing

Roll Sizes:	A	Standards	Mega
	Width: 3.75 ft (1.15 m) Length: 192.0 ft (58.5 m) Weight $\pm 10\%$: 48.0 lbs (20.4 kg) Area: 80 yd ² (66.9 m ²) #/Pallet: 21	7.5 ft (2.3 m) 96.0 ft (29.3 m) 48.0 lbs (20.4 kg) 80 yd ² (66.9 m ²) 20	7.5 ft (2.3 m) 120.0 ft (36.6 m) 60.0 lbs (27.2 kg) 100 yd ² (83.6 m ²) 16

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	9.45 oz/yd ² (320.4 g/m ²)
Thickness	ASTM D6525	.32 In (8.1 mm)
Tensile Strength-MD	ASTM D6818	143 lb/ft (2.1 kN/m)
Elongation-MD	ASTM D6818	14.9 %
Tensile Strength-TD	ASTM D6818	90 lb/ft (1.3 kN/m)
Elongation-TD	ASTM D6818	19.2 %
Light Penetration	ASTM D6567	13 %
Water Absorption	ASTM D1117	360 %
* 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**=5.24
	100mm (4in) / hr-30 min	SLR**=6.65
	150mm (6in) / hr-30 min	SLR**=8.45
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	1.20 lb/ft
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	308% 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	.025
RUSLE C-Factor	.024
Maximum Permissible Sheer Stress	1.50 psf (72 Pa)
Maximum Flow Velocity	6.7 ft/sec (2.0 m/sec)

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