Proud Member and Participant of:
www.eastcoasterosion.com
443 Bricker Road Bernville, PA 19506
1.800.582.4005 +1.610.488.8496 Fax +1.610.488.8494

Material and Performance Specification

ECS-1™ Single Net Straw Rolled Erosion Control Product

Description:

The ECS-1™ 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-1™ 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-1™ 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.

Matrix:	1	2
	100% Straw	N/A

Netting:	Type		Net Color
Top:	Lightweight Photodegradable Polypropylene		Green
Middle:	None		
Bottom:	None		

Net Opening:	Top	Middle	Bottom
	0.5" x 0.5"	N/A	N/A

Thread:	Type	Color
	Degradable Thread	White

Roll Sizes:	Standard		"A" Size		Mega	
Width:	8 ft	2.4 m	4.00 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*:	50 lbs	22.7 kg	50 lbs	22.7 kg	100 lbs	45.4 kg
Area:	100 yd²	83.6 m²	100 yd²	83.6 m²	200 yd²	167.2 m²
#/Pallet:	25		9		25	

*Weight at time of manufacturing.

Index Value Properties*:

Property	Test Method	Typical		
Mass/Unit Area	ASTM D6475	8.00	oz/yd²	271.2 g/m2
Thickness	ASTM D6525	0.30	in	7.62 mm
Tensile Strength-MD	ASTM D6818	121.00	lb/ft	1.77 kN/m
Elongation-MD	ASTM D6818	30	%	
Tensile Strength-TD	ASTM D6818	44.40	lb/ft	0.65 kN/m
Elongation-TD	ASTM D6818	35.0	%	
Light Penetration	ASTM D6567	22	%	
Density / Specific Gravity	ASTM D792	N/A	g/cm³	
Water Absorption	ASTM D1117	385	%	

*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**=5.63
	100mm (4in) / hr-30 min	SLR**=5.59
	150mm (6in) / hr-30 min	SLR**=5.58
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	1.39 lb/ft²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	484 %

*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
C-Factors	ASTM D6459		0.00
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1
< 50 ft (15 m)	0.001	N/A	N/A
50 ft – 100 ft	0.040	N/A	N/A
>100 ft (30 m)	0.080	N/A	N/A

*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	1.50	lbs/ft²	71.82 Pa
Unvegetated Velocity	ASTM D 6460	6.8	ft/s	2.07 m/s
Vegetated Shear Stress	NA	N/A	lbs/ft²	N/A Pa
Vegetated Velocity	NA	N/A	ft/s	N/A m/s
Manning's N (Value Represents a Range)		0.025		

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