

Material and Performance Specification

ECS-2® Double Net Straw Rolled Erosion Control Product

Description:

The ECS-2® is made with uniformly distributed 100% agricultural straw and two polypropylene nets securely sewn together with degrade 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-2® has functional longevity of approximately 12 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 or less and low to medium flow channels. The ECS-2® meets Type 2.D 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	
Netting:	Type	
	Top: Lightweight Photodegradable Polypropylen	
	Middle: None	
	Bottom: Lightweight Photodegradable Polypropyler	
Net Opening:	Top	Middle
	0.5" x 0.5"	0.5" x 0.5"
Thread:	Type	Color
	Degradable Threac	White
Roll Sizes:	Standard	"A" Size
		Mega
Width:	8 ft 2.4 m	4 ft 1.2 m
Length:	112.5 ft 34.3 m	225 ft 68.6 m
Weight*:	53 lbs 24.0 kg	53 lbs 24.0 kg
Area:	100 yd ² 83.6 m ²	100 yd ² 83.6 m ²
#/Pallet:	25	9
		25

*Weight at time of manufacturing

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6475	8.50 oz/yd ²	288.2 g/m ²
Thickness	ASTM D6525	0.32 in	8.13 mm
Tensile Strength-MD	ASTM D6818	150 lb/ft	2.19 kN/m
Elongation-MD	ASTM D6818	28 %	
Tensile Strength-TD	ASTM D6818	80 lb/ft	1.17 kN/m
Elongation-TD	ASTM D6818	29.4 %	
Light Penetration	ASTM D6567	19 %	
Density / Specific Gravity	ASTM D792	N/A g/cm ³	
Water Absorption	ASTM D1117	390 %	

*May differ depending upon raw material variations

Slope Performance Design Values*:

Property	Test Method	Value	
C-Factors	ASTM D6459	0.01	
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1
< 50 ft (15 m)	0.014	0.077	N/A
50 ft – 100 ft	0.048	0.084	N/A
>100 ft (30 m)	0.086	0.125	N/A

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

Bench-Scale Testing* (NTPPEP***):

Test Method	Parameters	Results
	50mm (2in) / hr-30 min	SLR**=5.84
ECTC Method 2 Rainfall	100mm (4in) / hr-30 min	SLR**=6.87
	150mm (6in) / hr-30 min	SLR**=8.09
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	1.61 lb/ft ²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	455 %

*Bench scale tests should not be used for design purposes.
**Soil Loss Ratio=Soil Loss Bare Soil/Soil Loss with RECP=1/C-Factor
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Channel Performance Design Values*:

Property	Test Method	Value		
Unvegetated Shear Stress	ASTM D 6460	2.05 lbs/ft ²	98.15 Pa	
Unvegetated Velocity	ASTM D 6460	7.5 ft/s	2.29 m/s	
Vegetated Shear Stress	NA	N/A lbs/ft ²	N/A Pa	
Vegetated Velocity	NA	N/A ft/s	N/A m/s	
Manning's N (Value Represents a Range)		0.029		

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