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Material and Performance Specification

ECX-1™ Single Net Excelsior Rolled Erosion Control Product

Description:

The ECX-1™ is made with uniformly distributed 100% Aspen wood excelsior 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 ECX-1™ has functional longevity of approximately 12 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 to 3:1 and low to medium flow channels. The ECX-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
	Aspen Wood Excelsior	

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

Net Opening:	Top	Middle	Bottom
	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	16 ft 4.9 m
Length:	112.5 ft 34.3 m	225 ft 68.6 m	112.5 ft 34.3 m
Weight*:	62 lbs 28.1 kg	62 lbs 28.1 kg	124 lbs 56.2 kg
Area:	100 yd^2 83.6 m^2	100 yd^2 83.6 m^2	200 yd^2 167.2 m^2
#/Pallet:	20	9	20

*Weight at time of manufacturing

Index Value Properties*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6475	8.80 oz/yd^2	298.4 g/m2
Thickness	ASTM D6525	0.38 in	9.65 mm
Tensile Strength-MD	ASTM D6818	122 lb/ft	1.78 kN/m
Elongation-MD	ASTM D6818	33 %	
Tensile Strength-TD	ASTM D6818	86 lb/ft	1.26 kN/m
Elongation-TD	ASTM D6818	33.0 %	
Light Penetration	ASTM D6567	36 %	
Density / Specific Gravity	ASTM D792	N/A g/cm^3	
Water Absorption	ASTM D1117	184 %	

*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**=3.98
	100mm (4in) / hr-30 min	SLR**=3.64
	150mm (6in) / hr-30 min	SLR**=3.33
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	1.72 lb/ft^2
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	519 %

*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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Slope Performance Design Values*:

Property	Test Method		Value
C-Factors	ASTM D6459		0.03
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1
< 50 ft (15 m)	0.034	0.180	N/A
50 ft – 100 ft	0.104	0.202	N/A
>100 ft (30 m)	0.208	0.319	N/A

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

Channel Performance Design Values*:

Property	Test Method				
Unvegetated Shear Stress	ASTM D 6460	1.78	lbs/ft^2	85.23	Pa
Unvegetated Velocity	ASTM D 6460	8.5	ft/s	2.59	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)			0.028		

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

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