



**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.

**Materials:**

	<b>Netting – One Side Only</b>	<b>Matrix</b>	<b>Thread</b>
	Lightweight Photodegradable Polypropylene 0.5" x 0.5" Opening	100% Aspen Excelsior 0.69 lbs yd <sup>2</sup> 373.4 g/m <sup>2</sup>	Degradable 1.50" stitch spacing

**Roll Sizes:**

	<b>A</b>	<b>Standard</b>	<b>Mega</b>
Width:	3.75 ft (1.15 m)	7.5 ft (2.3 m)	15.0 ft (4.6 m)
Length:	240.0 ft (73.1 m)	120.0 ft (36.6 m)	120.0 ft (36.6 m)
Weight ±10%:	68.0 lbs (30.8 kg)	68.0 lbs (30.8 kg)	115.0 lbs (52.2 kg)
Area:	100 yd <sup>2</sup> (83.6 m <sup>2</sup> )	100 yd <sup>2</sup> (83.6 m <sup>2</sup> )	200 yd <sup>2</sup> (167.2 m <sup>2</sup> )
#/Pallet:	9	16	16

**Index Value Properties\*:**

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	11.0 oz/yd <sup>2</sup> (373 g/m <sup>2</sup> )
Thickness	ASTM D6525	.38 in (9.7mm)
Tensile Strength-MD	ASTM D6818	122 lb/ft (1.8 kN/m)
Elongation-MD	ASTM D6818	33 %
Tensile Strength-TD	ASTM D6818	100 lb/ft (1.5 kN/m)
Elongation-TD	ASTM D6818	33 %
Light Penetration	ASTM D6567	15 %
Water Absorption	ASTM D1117	220 %

\* 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**=4.60
	100mm (4in) / hr-30 min	SLR**=5.17
	150mm (6in) / hr-30 min	SLR**=5.80
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	1.77 lb/ft <sup>2</sup>
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	452% 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  
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**Slope Performance Design Values\*:**

Property	Test Method	Value	
Manning's N		0.028	
<b>C-Factors</b>	ASTM D6459	.034	
<b>Slope Length (L)</b>	≤ 3:1	3:1-2:1	≥ 2:1
< 50 ft (15 m)	0.034	0.180	NA
50 ft – 100 ft	0.104	0.202	NA
>100 ft (30 m)	0.208	0.319	NA

\*Large-Scale Results obtained by 3<sup>rd</sup> Party GAI Accredited Independent Laboratory

**Channel Performance Design Values\*:**

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	1.78 lbs/ft <sup>2</sup> (85 Pa)
Unvegetated Velocity	ASTM D 6460	8.5 ft/s (2.6 m/s)
Vegetated Shear Stress	NA	NA
Vegetated Velocity	NA	NA

\*Large-Scale Results obtained by 3<sup>rd</sup> Party GAI Accredited Independent Laboratory

