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## Material and Performance Specification

### ECP-3™ Polypropylene Turf Reinforcement Mat

#### Description:

The ECP-3™ is made with uniformly distributed 100% green polypropylene fiber and three heavyweight polypropylene nets securely sewn together with UV stabilized thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation. The ECP-3™ is a permanent turf reinforcement mat and is suitable for 1:1 slopes and high-flow channels. The ECP-3™ meets Type 5.A, 5.B, 5.C and 5.D specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18.

<b>Matrix:</b>	<b>1</b>	<b>2</b>	
	Green or Tan Polypropylene Fiber	N/A	
<b>Netting:</b>	<b>Type</b>	<b>Net Color</b>	
	Top: Heavyweight 24# PMSF UV Stabilized Polypropylene	Black	
	Middle: Heavyweight 24# PMSF UV Stabilized Polypropylene		
	Bottom: Heavyweight 24# PMSF UV Stabilized Polypropylene		
<b>Net Opening:</b>	<b>Top</b>	<b>Middle</b>	<b>Bottom</b>
	0.4" x 0.5"	0.4" x 0.5"	0.4" x 0.5"
<b>Thread:</b>	<b>Type</b>	<b>Color</b>	
	UV Stabilized Thread	Black	
<b>Roll Sizes:</b>	<b>Standard</b>	<b>"A" Size</b>	<b>Mega</b>
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:*	125 lbs 56.7 kg	125 lbs 56.7 kg	250 lbs 113.4 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:	6	9	4

\*Weight at time of manufacturing within specified tolerances.

#### Index Value Properties\*:

Property	Test Method	Typical	
Mass/Unit Area	ASTM D6566	19.00 oz/yd <sup>2</sup>	644.2 g/m <sup>2</sup>
Thickness	ASTM D6525	0.41 in	10.41 mm
Tensile Strength-MD	ASTM D6818	1232 lb/ft	17.98 kN/m
Elongation-MD	ASTM D6818	17 %	
Tensile Strength-TD	ASTM D6818	1192 lb/ft	17.40 kN/m
Elongation-TD	ASTM D6818	19.0 %	
Light Penetration	ASTM D6567	15 %	
Density / Specific Gravity	ASTM D792	0.913 g/cm <sup>3</sup>	
Water Absorption	ASTM D1117	0 %	
Resiliency	ASTM D6524	93 %	
UV Resistance	ASTM D4355	100 %	1000 hours

\*May differ depending upon raw material variations

#### Slope Performance Design Values\*:

Property	Test Method	Value	
<b>C-Factors</b>	ASTM D6459	0.00	
<b>Slope Length (L)</b>	<b>≤ 3:1</b>	<b>3:1-2:1</b>	<b>≥ 2:1</b>
< 50 ft (15 m)	0.000	0.001	0.020
50 ft – 100 ft	0.001	0.003	0.024
>100 ft (30 m)	0.003	0.006	0.027

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

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

Test Method	Parameters	Results
	50mm (2in) / hr-30 min	SLR**=7.68
ECTC Method 2 Rainfall	100mm (4in) / hr-30 min	SLR**=10.42
	150mm (6in) / hr-30 min	SLR**=14.15
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	3.51 lb/ft <sup>2</sup>
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	426 %

\*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

#### Channel Performance Design Values\*:

Property	Test Method	Value	
Unvegetated Shear Stress	ASTM D 6460	3.80 lbs/ft <sup>2</sup>	181.94 Pa
Unvegetated Velocity	ASTM D 6460	12.1 ft/s	3.69 m/s
Vegetated Shear Stress	ASTM D 6460	14.0 lbs/ft <sup>2</sup>	670.32 Pa
Vegetated Velocity	ASTM D 6460	25.0 ft/s	7.62 m/s
Manning's N (Value Represents a Range)		0.028	

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

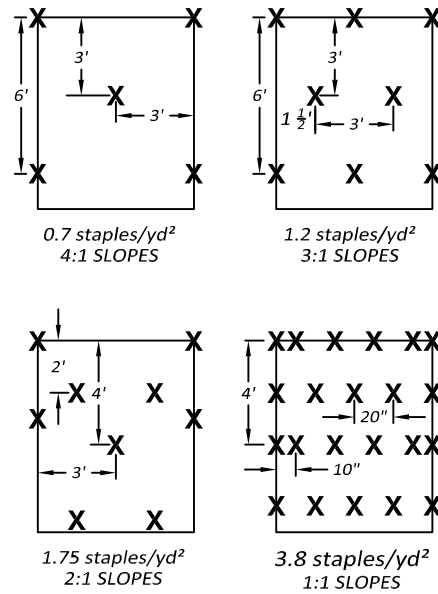
The values presented are for guidance purposes and do not constitute the practice of engineering. East Coast Erosion Blankets LLC (ECEB) ascertains that at the time of manufacture, all information presented herein is accurate and reliable and falls within the ECEB manufacturing product specification variances. If the product does not meet the stated values and ECEB is notified in writing prior to installation, the product will be replaced at no cost to the purchaser. ECEB will not be held liable for any type of damage or losses, directly, or indirectly for failure of this product. Current revision supersedes all previous versions for this product.

### Slope Installation Guidelines:

These guidelines are recommendations only. Any questions with the installation should be confirmed with your local distributor.

1. Dig a 6" by 6" trench both up-slope and down-slope of the area the matting is to be applied. Prepare the slope soil surface (raking, seeding and fertilizing).
2. Begin by placing the blanket a minimum of 12" down-slope of the up-slope trench. Secure the blanket at the bottom of the trench with staples placed 12" apart. Backfill and compact the trench. Apply seed, and fold the blanket over soil, secure with a row of staples placed 12" apart across the width of the blanket. (See Diagram A)
3. Roll the blanket vertically down the slope. Secure using the appropriate staple pattern below, specified by slope. (See Staple Patterns)
4. Parallel blankets must be overlapped by a minimum of 4", and secured with a row of staples placed approximately 3'-0" apart. (See Diagram B)
5. Additional vertical blankets can be joined using a minimum 4" overlapping or shingle style (See Diagrams C) in the direction of water flow. Connect the blankets by placing staples approximately 12" apart across the width of the blankets.
6. For maximum performance a check slot should be placed at 25'-40' intervals. Place a row of staples 4" apart along the entire width of the slope. A second row should be placed 4" below in a staggered pattern. Then continue with general installation. (See Diagrams D)
7. The end of blanket must be secured in a 6" x 6" trench with a row of staples placed at 12" intervals. (Diagram E)

### Staple Patterns:



### Specifications and Equivalency:

All product material and performance specifications are available from East Coast Erosion Blankets via the product specification sheet. Utilization of a 11 gauge staple, a minimum 6" long by 1" crown, is recommended. The tightly compressed blankets are wrapped and include a product label, code and installation guide.

In addition to meeting all data available on the specification sheet, equivalent products shall meet the following requirements:

- The product must be listed with the NTPEP database.
- The product must meet the Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC).
- The product must meet the Federal Highway Administrations's (FHWA) FP-03 Section 713.17 specification.

### Slope Installation Detail

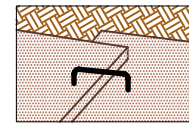
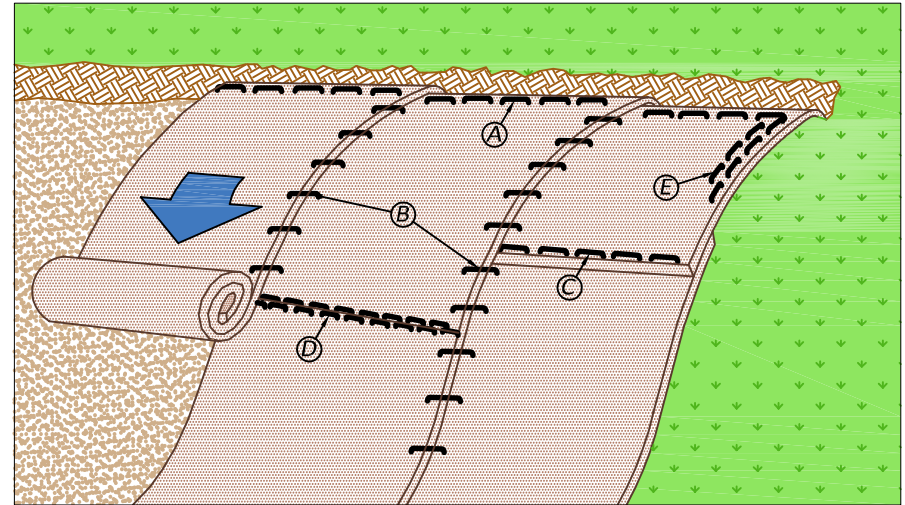


DIAGRAM B

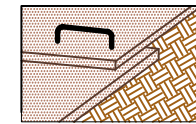


DIAGRAM C

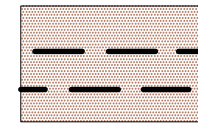
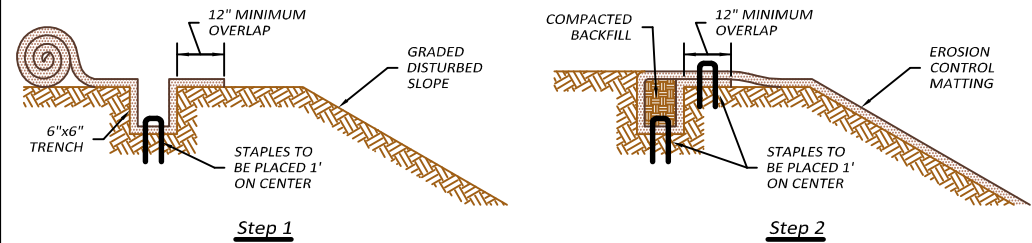


DIAGRAM D

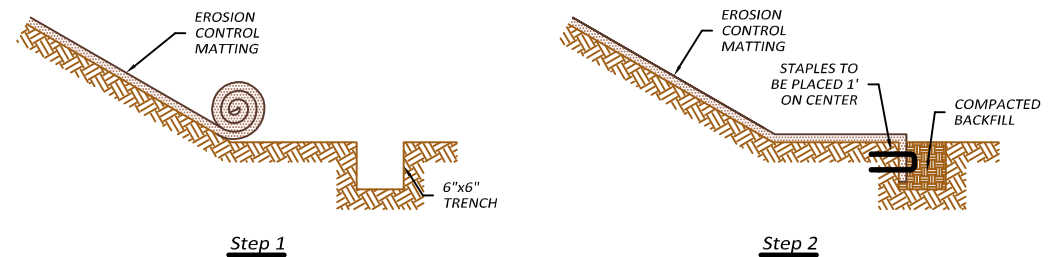
### Up-slope Trench Installation Detail (Diagram A)



Step 1

Step 2

### Down-slope Trench Installation Detail (Diagram E)



Step 1

Step 2



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DRAWN BY: MR

DRAWING #: EC-SLOPE

REV. # 1

DATE: 1/2/09



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## Material and Performance Specification

### Sediment Retention Fiber Rolls

#### 100% Aspen Wood Fibers

##### Description:

ECWATTLES are flexible, cylindrical Sediment Retention Fiber Rolls (SRFRs) comprised of various types of compressed matrixes, designed to reduce hydraulic energy and filter sediment-laden stormwater runoff on slopes and in channels. Each pallet is shrink-wrapped and labeled. SRFRs are designed to be used as perimeter controls, slope interceptor devices, check dams, around temporary soil stockpiles, at curb cuts and drain inlets. SRFRs should be installed in accordance to East Coast Erosion Blankets, LLC's Wattle Installation Guidelines and secured with wooden stakes.

**TYPE: 100% Aspen Wood Fibers**

**Netting: UV Degradable Polyethylene**

##### Standard Product Specifications

Diameter:	6.0 in (15.2 cm)	8.0 in (20.3 cm)	9.0 in (22.9 cm)
Length:	N/A	N/A	N/A
Weight +10%:	N/A	N/A	N/A
Density:	N/A	N/A	N/A
#/Pallet:	N/A	N/A	N/A
Pallets/truck	N/A	N/A	N/A

Diameter:	12.0 in (30.5 cm)	16.0 in (40.6 cm)	20.0 in (50.8 cm)
Length:	10 ft (3.05 m)	N/A	10 ft (3.05 m)
Weight +10%:	25 lbs	N/A	45 lbs
Density:	3.18 lb/ft <sup>3</sup> (50.94 kg/m <sup>3</sup> )	N/A	2.08 lb/ft <sup>3</sup> (33.32 kg/m <sup>3</sup> )
#/Pallet:	20	N/A	10
Pallets/truck	28	N/A	28

*The values presented are for guidance purposes and do not constitute the practice of engineering. East Coast Erosion Blankets LLC (ECEB) ascertains that at the time of manufacture, all information presented herein is accurate and reliable and falls within the ECEB manufacturing product specification variances. If the product does not meet the stated values and ECEB is notified in writing prior to installation, the product will be replaced at no cost to the purchaser. ECEB will not be held liable for any type of damage or losses, directly, or indirectly for failure of this product. Current revision supersedes all previous versions for this product.*