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## Material and Performance Specification

### ECSC-2B™ Double Net Straw/Coconut Biodegradable Rolled Erosion Control Product

#### Description:

The ECSC-2B™ is made with uniformly distributed 70% agricultural straw, 30% coconut fiber and two organic jute nets securely sewn together with biodegradable thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation. The ECSC-2B™ has functional longevity of approximately 18 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 to 1:1 and low to medium flow channels. The ECSC-2B™ meets Type 3.B specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

|                |           |             |
|----------------|-----------|-------------|
| <b>Matrix:</b> | <b>1</b>  | <b>2</b>    |
|                | 70% Straw | 30% Coconut |

|                 |                                 |                  |
|-----------------|---------------------------------|------------------|
| <b>Netting:</b> | <b>Type</b>                     | <b>Net Color</b> |
|                 | Top: Organic Leno Weave Jute    | Natural          |
|                 | Middle: None                    |                  |
|                 | Bottom: Organic Leno Weave Jute |                  |

|                     |             |               |               |
|---------------------|-------------|---------------|---------------|
| <b>Net Opening:</b> | <b>Top</b>  | <b>Middle</b> | <b>Bottom</b> |
|                     | 0.5" x 1.0" |               | 0.5" x 1.0"   |

|                |                      |              |
|----------------|----------------------|--------------|
| <b>Thread:</b> | <b>Type</b>          | <b>Color</b> |
|                | Biodegradable Thread | Natural      |

|                    |                     |                     |                     |                     |                     |                      |
|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| <b>Roll Sizes:</b> | <b>Standard</b>     |                     | <b>"A" Size</b>     |                     | <b>Mega</b>         |                      |
| Width:             | 7.5 ft              | 2.3 m               | 3.75 ft             | 1.1 m               | 15 ft               | 4.6 m                |
| Length:            | 120 ft              | 36.6 m              | 240 ft              | 73.2 m              | 120 ft              | 36.6 m               |
| Weight ±10%:       | 60 lbs              | 27.2 kg             | 60 lbs              | 27.2 kg             | 120 lbs             | 54.4 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:          | 16                  |                     | 6                   |                     | 16                  |                      |

#### Index Value Properties\*:

| Property                   | Test Method | Typical                 |                        |
|----------------------------|-------------|-------------------------|------------------------|
| Mass/Unit Area             | ASTM D6475  | 9.50 oz/yd <sup>2</sup> | 322.1 g/m <sup>2</sup> |
| Thickness                  | ASTM D6525  | 0.33 in                 | 8.38 mm                |
| Tensile Strength-MD        | ASTM D6818  | 223 lb/ft               | 3.25 kN/m              |
| Elongation-MD              | ASTM D6818  | 14 %                    |                        |
| Tensile Strength-TD        | ASTM D6818  | 134 lb/ft               | 1.96 kN/m              |
| Elongation-TD              | ASTM D6818  | 16.3 %                  |                        |
| Light Penetration          | ASTM D6567  | 12 %                    |                        |
| Density / Specific Gravity | ASTM D792   | N/A %                   |                        |
| Water Absorption           | ASTM D1117  | 361 %                   |                        |

\*May differ depending upon raw material variations

#### Slope Performance Design Values\*:

| Property                | Test Method  | Value          |              |  |
|-------------------------|--------------|----------------|--------------|--|
| <b>C-Factors</b>        | ASTM D6459   | 0.06           |              |  |
| <b>Slope Length (L)</b> | <b>≤ 3:1</b> | <b>3:1-2:1</b> | <b>≥ 2:1</b> |  |
| < 50 ft (15 m)          | 0.055        | 0.070          | 0.122        |  |
| 50 ft – 100 ft          | 0.073        | 0.101          | 0.167        |  |
| >100 ft (30 m)          | 0.122        | 0.132          | 0.212        |  |

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

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

| Test Method            | Parameters              | Results     |
|------------------------|-------------------------|-------------|
|                        | 50mm (2in) / hr-30 min  | SLR**=11.89 |
| ECTC Method 2 Rainfall | 100mm (4in) / hr-30 min | SLR**=13.60 |
|                        | 150mm (6in) / hr-30 min | SLR**=15.50 |

ECTC Method 3 Shear Resistance Shear at .50 in soil loss 2.46 lb/ft<sup>2</sup>

ECTC Method 4 Germination Top soil; Fescue; 21 day incubation 671 %

\*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 | 2.00  | lbs/ft <sup>2</sup> | 95.76 | Pa  |
| Unvegetated Velocity                   | ASTM D 6460 | 8.0   | ft/s                | 2.44  | m/s |
| Vegetated Shear Stress                 | NA          | N/A   | lbs/ft <sup>2</sup> | 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<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.