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Material and Performance Specification

# ECC-2B™ Double Net Coconut Biodegradable Rolled Erosion Control Product

## Description:

The ECC-2B™ is made with uniformly distributed 100% 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 ECC-2B™ has functional longevity of approximately 24 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 1:1 and medium to high flow channels. The ECC-2B™ meets Type 4 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% Coconut | |

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

| Net Opening: | Top | Middle | Bottom |
|---|---|---|---|
| | 0.5" x 1.0" | | 0.5" x 1.0" |

| Thread: | Type | Color |
|---|---|---|
| | Biodegradable Thread | Natural |

| Roll Sizes: | Standard | "A" Size | Mega |
|---|---|---|---|
| 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 $yd^2$ 83.6 $m^2$ | 100 $yd^2$ 83.6 $m^2$ | 200 $yd^2$ 167.2 $m^2$ |
| #/Pallet: | 16 | 6 | 16 |

## Index Value Properties*:

| Property | Test Method | Typical | |
|---|---|---|---|
| Mass/Unit Area | ASTM D6475 | 9.50 $oz/yd^2$ | 322.1 g/m2 |
| Thickness | ASTM D6525 | 0.25 in | 6.35 mm |
| Tensile Strength-MD | ASTM D6818 | 240 lb/ft | 3.50 kN/m |
| Elongation-MD | ASTM D6818 | 11 % | |
| Tensile Strength-TD | ASTM D6818 | 164 lb/ft | 2.39 kN/m |
| Elongation-TD | ASTM D6818 | 16.0 % | |
| Light Penetration | ASTM D6567 | 17 % | |
| Density / Specific Gravity | ASTM D792 | N/A % | |
| Water Absorption | ASTM D1117 | 340 % | |

*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**=14.16 |
| | 100mm (4in) / hr-30 min | SLR**=18.25 |
| | 150mm (6in) / hr-30 min | SLR**=23.24 |
| ECTC Method 3 Shear Resistance | Shear at .50 in soil loss | 2.76 $lb/ft^2$ |
| ECTC Method 4 Germination | Top soil; Fescue; 21 day incubation | 501 % |

*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

## Slope Performance Design Values*:

| Property | Test Method | | Value |
|---|---|---|---|
| **C-Factors** | ASTM D6459 | | 0.04 |
| **Slope Length (L)** | **≤ 3:1** | **3:1-2:1** | **≥ 2:1** |
| < 50 ft (15 m) | 0.040 | 0.053 | 0.102 |
| 50 ft – 100 ft | 0.060 | 0.084 | 0.120 |
| >100 ft (30 m) | 0.094 | 0.114 | 0.134 |

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

## Channel Performance Design Values*:

| Property | Test Method | Value | | | |
|---|---|---|---|---|---|
| Unvegetated Shear Stress | ASTM D 6460 | 2.25 | $lbs/ft^2$ | 107.73 | Pa |
| Unvegetated Velocity | ASTM D 6460 | 9.0 | ft/s | 2.74 | 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) | | | 0.025 | | |

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



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