



Material and Performance Specification Sheet

ECS-1B Single Net Straw Biodegradable Rolled Erosion Control Product

Description: The ECS-1B is made with uniformly distributed 100% agricultural straw and one jute net securely sewn together with biodegradable thread. The tightly compressed blankets are placed inside vented bags and include a product label, code and installation guide. The blankets are palletized for easy transportation.

The ECS-1B has functional longevity of approximately 12 months, but will vary depending on soil and climatic conditions and is suitable for slopes 3:1 or less. The ECS-1B 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: | Netting – One Side Only | Matrix | Thread |
| | Leno Weave Jute 100% Biodegradable | 100% Agricultural Straw 0.55 lbs/sq yd | Biodegradable 1.50" stitch spacing |

| | |
|---------------------|--|
| Roll Sizes: | Standards |
| Width: | 7.5 ft (2.3 m) |
| Length: | 120.0 ft (36.6 m) |
| Weight $\pm 10\%$: | 66.2 lbs (30.0 kg) |
| Area: | 100 yd ² (83.6 m ²) |
| #/Pallet: | 16 |

Index Value Properties*:

| Property | Test Method | Typical |
|---------------------|-----------------|-------------------------|
| Mass/Unit Area | ASTM D6475 | 10.6 oz/yd ² |
| Thickness | ASTM D5199 | .31 in |
| Tensile Strength-MD | ASTM D5035 | 160 lb/ft |
| Elongation-MD | ASTM D5035 | 4.7 % |
| Tensile Strength-TD | ASTM D5035 | 195 lb/ft |
| Elongation-TD | ASTM D5035 | 5.1 % |
| Light Penetration | ECTC Guidelines | 10 % |
| Water Absorption | ASTM D1117 | 453 % |

* 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**=8.67 |
| | 100mm (4in) / hr-30 min | SLR**=10.07 |
| | 150mm (6in) / hr-30 min | SLR**=11.69 |
| ECTC Method 3 Shear Resistance | Shear at .50 in soil loss | 1.09 lb/ft |
| ECTC Method 4 Germination | Top soil; Fescue; 21 day incubation | 219% 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 (soil loss is based on regression analysis).

Design Values:

| Property | Value |
|----------------------------------|-------------------------|
| Manning's N | .036 |
| RUSLE C-Factor | .075 |
| Maximum Permissible Sheer Stress | 1.55 psf (74 Pa) |
| Maximum Flow Velocity | 6.5 ft/sec (1.98 m/sec) |

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