



Material and Performance Specification Sheet

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A **tenstar** Company

SC150BN Erosion Control Blanket

The extended-term double net erosion control blanket shall be a machine-produced 100% biodegradable blanket of 70% agricultural straw and 30% coconut fiber with a functional longevity of up to 18 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw and coconut evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with 100% biodegradable woven natural organic fiber netting. The top netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands (commonly referred to as a Leno weave) to form an approximate 0.50 x 1.0 (1.27 x 2.54 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread.

The SC150BN shall meet requirements established by the Erosion Control Technology Council (ECTC) Specification and the US Department of Transportation, Federal Highway Administration's (FHWA) *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-03 Section 713.17 as a type 3.B Extended-term Erosion Control Blanket*.

The SC150BN is also available with the DOT System™, which consists of installation staple patterns clearly marked on the erosion control blanket with environmentally safe paint. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

| Material Content | | |
|------------------|--------------------------------------------------|------------------------------------------------------------|
| Matrix | 70% Straw Fiber | 0.35 lbs/yd ² (0.19 kg/m ²) |
| | 30% Coconut Fiber | 0.15 lbs/yd ² (0.08 kg/m ²) |
| Nettings | Top – Leno Woven 100% biodegradable organic jute | 9.3 lb/1000 ft ² (4.5 kg/100 m ²) |
| | Bottom – 100% biodegradable organic jute fiber | 7.7 lb/1000 ft ² (3.76 kg/100 m ²) |
| Thread | Biodegradable | |

SC150BN is available in the following standard roll sizes:

| | |
|--------------|---------------------------------------------|
| Width | 6.67 ft (2.03 m) |
| Length | 108 ft (32.92 m) |
| Weight ± 10% | 52.22 lbs (23.69 kg) |
| Area | 80.0 yd ² (66.9 m ²) |

Index Value Properties:

| Property | Test Method | Typical |
|-----------------------|-----------------|-------------------------------------------------|
| Thickness | ASTM D6525 | 0.28 in (7.11 mm) |
| Resiliency | ECTC Guidelines | 86% |
| Water Absorbency | ASTM D1117 | 169% |
| Mass/Unit Area | ASTM 6475 | 9.66 oz/yd ² (328 g/m ²) |
| Swell | ECTC Guidelines | 46% |
| Smolder Resistance | ECTC Guidelines | Yes |
| Stiffness | ASTM D1388 | 0.42 oz-in |
| Light Penetration | ECTC Guidelines | 14.1% |
| Tensile Strength – MD | ASTM D6818 | 164.4 lbs/ft (2.44 kN/m) |
| Elongation – MD | ASTM D6818 | 7.2% |
| Tensile Strength – TD | ASTM D6818 | 226.8 lbs/ft (3.36 kN/m) |
| Elongation – TD | ASTM D6818 | 10.1% |

Performance Design Values:

| Maximum Permissible Shear Stress | |
|----------------------------------|-----------------------------------|
| Unvegetated Shear Stress | 2.10 lbs/ft ² (100 Pa) |
| Unvegetated Velocity | 8.00 ft/s (2.44 m/s) |

| Slope Design Data: C Factors | | | |
|------------------------------|---------------------|-----------|-------|
| | Slope Gradients (S) | | |
| Slope Length (L) | ≤ 3:1 | 3:1 – 2:1 | ≥ 2:1 |
| ≤ 20 ft (6 m) | 0.001 | 0.029 | 0.063 |
| 20-50 ft | 0.051 | 0.055 | 0.092 |
| ≥ 50 ft (15.2 m) | 0.10 | 0.080 | 0.120 |

| Roughness Coefficients- Unveg. | |
|--------------------------------|---------------|
| Flow Depth | Manning's n |
| ≤ 0.50 ft (0.15 m) | 0.050 |
| 0.50 – 2.0 ft | 0.050 – 0.018 |
| ≥ 2.0 ft (0.60 m) | 0.018 |

Bench Scale Testing* (NTPEP):

| Test Method | Parameters | Results |
|-----------------------------------|-------------------------------------|--------------------------------|
| ECTC Method 2 Rainfall | 50 mm (2 in)/hr for 30 min | SLR** = 9.98 |
| | 100mm (4 in)/hr for 30 min | SLR** = 13.01 |
| | 150 mm (6 in)/hr for 30 min | SLR** = 16.95 |
| ECTC Method 3 Shear Resistance | Shear at 0.50 inch soil loss | 2.27 lbs/ft² |
| ECTC Method 4 Germination | Top Soil, Fescue, 21 day incubation | 723% improvement of biomass |

* Bench Scale tests should not be used for design purposes

** Soil Loss Ratio = Soil loss with Bare Soil/Soil Loss with RECP (soil loss is based on regression analysis)

Product Participant of:

