

## Material and Performance Specification C125BN Erosion Control Blanket

Description
<p>The long-term double net erosion control blanket shall be a machine-produced mat of 100% coconut fiber with a functional longevity of up to 24 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the 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 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 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 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.</p> <p>The C125BN shall meet Type 4 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) <i>FP-03 Section 713.17</i></p>

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.28 in (7.11 mm)
Resiliency	ECTC Guidelines	85%
Water Absorbency	ASTM D1117	365%
Mass/Unit Area	ASTM 6475	8.83 oz/yd <sup>2</sup> (300 g/m <sup>2</sup> )
Swell	ECTC Guidelines	40%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	0.11 oz-in
Light Penetration	ECTC Guidelines	17.7%
Tensile Strength –MD	ASTM D6818	141.6 lbs/ft (2.1 kN/m)
Elongation – MD	ASTM D6818	14%
Tensile Strength – TD	ASTM D6818	222 lbs/ft (3.29 kN/m)
Elongation – TD	ASTM D6818	14.3%

Material Content		
Matrix	100% Coconut Fiber	0.5 lbs/yd <sup>2</sup> (0.27 kg/m <sup>2</sup> )
Netting	Leno Woven 100% biodegradable jute	9.3 lb/1000 ft <sup>2</sup> (4.5 kg/100 m <sup>2</sup> )
	100% biodegradable jute	7.7 lb/1000 ft <sup>2</sup> (3.76 kg/100 m <sup>2</sup> )
Thread	Biodegradable	

Maximum Permissible Shear Stress	
Unvegetated Shear Stress	2.35 lbs/ft <sup>2</sup> (112 Pa)
Unvegetated Velocity	10.00 ft/s (3.05 m/s)

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8.0 ft (2.4 m)	15.5 ft (4.72 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	90 ft (27.43 m)
Weight ± 10%	52.22 lbs (23.69 kg)	65.25 lbs (29.61 kg)	101.1 lbs (45.86 kg)
Area	80 yd <sup>2</sup> (66.9 m <sup>2</sup> )	100 yd <sup>2</sup> (83.61 m <sup>2</sup> )	155 yd <sup>2</sup> (129.6 m <sup>2</sup> )
	Leno Weave Top only	Leno Top and Bottom	Leno Top and Bottom

Slope Design Data: C Factors			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.0001	0.018	0.050
20-50 ft	0.003	0.040	0.060
≥ 50 ft (15.2 m)	0.007	0.070	0.070

Bench Scale Testing (NTPEP)		
Test Method	Parameters	Results
ECTC 2 Rainfall	50 mm (2 in)/hr-30 min 100mm (4 in)/hr-30 min 150 mm (6 in)/hr-30 min	SLR** = 6.83 SLR** = 10.76 SLR** = 16.95
ECTC 3 Shear Res.	Shear at 0.50 inch soil loss	3.13 lbs/ft <sup>2</sup>
ECTC 4 Germination	Top Soil, Fescue, 21 day incubation	401% improvement of biomass

\* Bench Scale tests should not be used for design purposes  
 \*\* Soil Loss Ratio = Soil Loss Bare Soil/Soil Loss with RECP

Roughness Coefficients- Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.022
0.50 – 2.0 ft	0.022 – 0.014
≥ 2.0 ft (0.60 m)	0.014

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