



# Material and Performance Specification Sheet

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A **tensar** Company

## C125 Erosion Control Blanket

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 36 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 a heavyweight polypropylene netting having ultraviolet additives to delay breakdown and an approximate 0.63 x 0.63 (1.59 x 1.59 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread.

The C125 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 4 Long-term Erosion Control Blanket.*

The C125 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	100% Coconut Fiber	0.5 lbs/yd <sup>2</sup> (0.27 kg/m <sup>2</sup> )
Nettings	Both sides – Heavyweight UV stabilized	3.0 lb/1000 ft <sup>2</sup> ( 1.47 kg/100 m <sup>2</sup> )
Thread	100% Black Polypropylene	

C125 is available in the following standard roll sizes:

Width	6.67 ft (2.03 m)	16 ft (4.87 m)
Length	108 ft (32.92 m)	108 ft (32.92 m)
Weight ± 10%	44 lbs (19.95 kg)	105.6 lbs (47.9 kg)
Area	80.0 yd <sup>2</sup> (66.9 m <sup>2</sup> )	192 yd <sup>2</sup> (165.5 m <sup>2</sup> )

Index Value Properties:

Property	Test Method	Typical
Thickness	ASTM D6525	0.31 in (7.87 mm)
Resiliency	ECTC Guidelines	82%
Water Absorbency	ASTM D1117	220%
Mass/Unit Area	ASTM 6475	8.00 oz/yd <sup>2</sup> (271 g/m <sup>2</sup> )
Swell	ECTC Guidelines	13%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	0.75 oz-in
Light Penetration	ECTC Guidelines	6.6%
Tensile Strength –MD	ASTM D6818	294 lbs/ft (4.36 kN/m)
Elongation – MD	ASTM D6818	21.3%
Tensile Strength – TD	ASTM D6818	205.2 lbs/ft (3.04 kN/m)
Elongation – TD	ASTM D6818	28.4%

Performance Design Values:

Maximum Permissible Shear Stress	
Unvegetated Shear Stress	2.25 lbs/ft <sup>2</sup> (108 Pa)
Unvegetated Velocity	10.00 ft/s (3.05 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	0.082
20-50 ft	0.036	0.060	0.096
≥ 50 ft (15.2 m)	0.070	0.090	0.110

Bench Scale Testing\* (NTPEP):

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50 mm (2 in)/hr for 30 min	SLR** = 14.93
	100mm (4 in)/hr for 30 min	SLR** = 14.97
	150 mm (6 in)/hr for 30 min	SLR** = 15.00
ECTC Method 3 Shear Resistance	<b>Shear at 0.50 inch soil loss</b>	<b>2.68 lbs/ft<sup>2</sup></b>
ECTC Method 4 Germination	Top Soil, Fescue, 21 day incubation	477% 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)		

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

Product Participant of:



Updated 3/09