



Material and Performance Specification Sheet

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A **tesar** Company

S150 Erosion Control Blanket

The short-term double net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 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 evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread.

The S150 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 2.D Short-term Double Net Erosion Control Blanket.*

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% Straw Fiber	0.5 lbs/yd ² (0.27 kg/m ²)
Nettings	Top and Bottom nets, lightweight photodegradable	1.5 lb/1000 ft ² (0.73 kg/100 m ²) approx. weight
Thread	Degradable	

S150 is available in the following standard roll sizes:

Width	4.0 ft (1.2 m)	6.67 ft (2.03 m)	16 ft (4.87 m)
Length	135 ft (41.14 m)	108 ft (32.92 m)	108 ft (32.92 m)
Weight ± 10%	30 lbs (13.6 kg)	40 lbs (18.14 kg)	96 lbs (43.54 kg)
Area	60 yd ² (50.16 m ²)	80.0 yd ² (66.9 m ²)	192 yd ² (165.5 m ²)

Index Value Properties:

Property	Test Method	Typical
Thickness	ASTM D6525	0.36 in (9.14 mm)
Resiliency	ECTC Guidelines	80.5%
Water Absorbency	ASTM D1117	514%
Mass/Unit Area	ASTM 6475	10.52 oz/yd ² (357.7 g/m ²)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.06 oz-in
Light Penetration	ECTC Guidelines	9.8%
Tensile Strength – MD	ASTM D6818	169.2 lbs/ft (2.51 kN/m)
Elongation – MD	ASTM D6818	17.2%
Tensile Strength – TD	ASTM D6818	164.4 lbs/ft (2.44 kN/m)
Elongation – TD	ASTM D6818	33.1%

Performance Design Values:

Maximum Permissible Shear Stress	
Unvegetated Shear Stress	1.75 lbs/ft ² (84 Pa)
Unvegetated Velocity	6.00 ft/s (1.83 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)	0.004	0.106	NA
20-50 ft	0.062	0.118	NA
≥ 50 ft (15.2 m)	0.12	0.180	NA

Bench Scale Testing* (NTPEP):

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50 mm (2 in)/hr for 30 min	SLR** = 8.04
	100mm (4 in)/hr for 30 min	SLR** = 10.46
	150 mm (6 in)/hr for 30 min	SLR** = 13.67
ECTC Method 3 Shear Resistance	Shear at 0.50 inch soil loss	2.1 lbs/ft²
ECTC Method 4 Germination	Top Soil, Fescue, 21 day incubation	484% improvement of biomass

Roughness Coefficients- Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.055
0.50 – 2.0 ft	0.055 – 0.021
≥ 2.0 ft (0.60 m)	0.021

* 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:

