Material and Performance Specification Sheet

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A tensar. Company

DS150 Erosion Control Blanket

The ultra short-term double net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 2 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 polypropylene netting having an approximate 0.50 x 0.50 (1.27 x 1.27 cm) mesh with photodegradable accelerators to provide breakdown of the netting within approximately 60 days, depending upon geographical location and elevation. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread.

The DS150 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 1.D Ultra 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 with photo accelerators	1.5 lb/1000 ft^2 (0.73 kg/100 m^2) approx. weight
Thread	Degradable	

DS150 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	0.34 in (8.59 mm)
Resiliency	ECTC Guidelines	80.5%
Water Absorbency	ASTM D1117	290%
Mass/Unit Area	ASTM 6475	7.59 oz/yd^2 (257 g/m^2)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.06 oz-in
Light Penetration	ECTC Guidelines	8.8%
Tensile Strength –MD	ASTM D6818	112.8 lbs/ft (1.67 kN/m)
Elongation – MD	ASTM D6818	22.5%
Tensile Strength – TD	ASTM D6818	117.6 lbs/ft (1.74 kN/m)
Elongation – TD	ASTM D6818	22.7%

Bench Scale Testing* (NTPEP):

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50 mm (2 in)/hr for 30 min	SLR** = 3.76
	100mm (4 in)/hr for 30 min	SLR** = 4.61
	150 mm (6 in)/hr for 30 min	SLR** = 5.65
ECTC Method 3 Shear Resistance	**Shear at 0.50 inch soil loss**	**2.06 lbs/ft^2**
ECTC Method 4 Germination	Top Soil, Fescue, 21 day incubation	424% 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)

Updated 3/09

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

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

Product Participant of: QDOR Performance Verified