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Material and Performance Specification
S75BN Erosion Control Blanket

Description

The short-term single 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 side with a 100% biodegradable woven natural organic fiber net. The netting shall consist of machine directional strands formed from two intertwined yarns with across directional strands interwoven through the twisted machine strands (commonly referred to as a Leno weave) to form 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.

The S75BN shall meet Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) *FP-03 Section 713.17*

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.24 in (6.1 mm)
Resiliency	ECTC Guidelines	81.4%
Water Absorbency	ASTM D1117	257%
Mass/Unit Area	ASTM 6475	9.99 oz/yd^2 (339.7 g/m^2)
Swell	ECTC Guidelines	15.7%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.92 oz-in
Light Penetration	ECTC Guidelines	9.1%
Tensile Strength –MD	ASTM D6818	187.2 lbs/ft (2.78 kN/m)
Elongation – MD	ASTM D6818	6.7%
Tensile Strength – TD	ASTM D6818	193.2 lbs/ft (2.86 kN/m)
Elongation – TD	ASTM D6818	8.5%

Material Content		
Matrix	100% Straw Fiber	0.5 lbs/yd^2 (0.27 kg/m^2)
Netting	Top side only, Leno woven 100% biodegradable natural organic fiber	9.3 lb/1000 ft^2 (4.5 kg/100 m^2) approx. weight
Thread	biodegradable	

Maximum Permissible Shear Stress	
Unvegetated Shear Stress	1.60 lbs/ft^2 (76 Pa)
Unvegetated Velocity	5.00 ft/s (1.52 m/s)

Standard Roll Sizes		
Width	6.67 ft (2.03 m)	8.0 ft (2.44 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)
Weight ± 10%	46.4 lbs (21.05 kg)	58 lbs (26.31 kg)
Area	80 yd^2 (66.9 m^2)	100 yd^2 (83.61 m^2)

Slope Design Data: C Factors			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.029	NA	NA
20-50 ft	0.11	NA	NA
≥ 50 ft (15.2 m)	0.19	NA	NA

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** = 6.63 SLR** = 7.25 SLR** = 7.92
ECTC 3 Shear Res.	Shear at 0.50 inch soil loss	2.07 lbs/ft^2
ECTC 4 Germination	Top Soil, Fescue, 21 day incubation	464% 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)	0.055
0.50 – 2.0 ft	0.055 – 0.021
≥ 2.0 ft (0.60 m)	0.021

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