



Specification Sheet – BioNet® C700BN™ Erosion Control Blanket

DESCRIPTION

The long-term double-net Erosion Control Blanket (ECB) shall be a 100% biodegradable, machine-produced mat fabricated in the U.S.A. of coconut (coir) fiber with a functional longevity of greater than 36 months and permissible shear stress exceeding 2.25 psf. (**NOTE:** Functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation.) The blanket shall be of consistent thickness with the coconut fiber evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a 60 x 50 woven coir fiber netting with mesh openings not to exceed .75 in. x .75 in. (1.90 x 1.90 cm). The blanket shall be covered on the bottom side with 100% biodegradable woven natural fiber jute netting. The jute netting shall form an approximate 0.50 in. x 1.0 in. (1.27 x 2.54 cm) mesh. The blanket shall be sewn together on 1.50 in. (3.81 cm) centers with degradable thread.

The C700BN shall meet Type 4 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) *FP-03 Section 713.17*.

Material Content

Matrix	100% Coconut Fiber	0.5 lb/sy (270 g/sm)
	100% biodegradable 60 x 50 coir netting	143 lb/1000 sf (700 g/sm)
Netting	100% biodegradable jute netting	7.7 lb/1000 sf (37.6 g/sm)
Thread	Biodegradable	

Standard Roll Sizes

Width	8.0 ft (2.4 m)
Length	45 ft (13.7 m)
Weight ± 10%	74.4 lbs (33.75 kg)
Area	40 sy (33.45 sm)

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.56 in. (14.2 mm)
Water Absorbency	ASTM D1117	186.8%
Mass/Unit Area	ASTM 6475	26.61 oz/sy (903 g/sm)
Swell	ECTC Guidelines	35%
Lignin Content	TAPPI TM222	32.8%
Light Penetration	ASTM D6567	14.9%
Tensile Strength – MD	ASTM D6818	1271 lbs/ft (18.84 kN/m)
Elongation – MD	ASTM D6818	38.7%
Tensile Strength – TD	ASTM D6818	834 lbs/ft (12.34 kN/m)
Elongation – TD	ASTM D6818	41.4%

Maximum Permissible Shear Stress

Unvegetated Shear Stress	2.35 psf (112 Pa)
Unvegetated Velocity	10 fps (3.05 m/s)

Slope Design Data: C Factors

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

Roughness Coefficients – Unvegetated

Flow Depth	Manning's n
≤ 0.15 m (0.50 ft)	0.022
0.50-2.0 ft	0.022-0.014
≥ 0.60 m (2.0 ft)	0.014



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