MATERIAL PROPERTY DATA SHEET

ECSC-3™

Permanent • Triple Net • Organic Fiber Matrix • Turf Reinforcement Mat

DESCRIPTION

ECSC-3 consists of a machine produced, 70% straw and 30% coconut fiber matrix and three UV-stabilized, synthetic nets securely sewn together with UV-stabilized thread. The tightly compressed blankets are wrapped and palletized for easy transportation. ECSC-3 is intended for slope or channel erosion control applications needing permanent functionality.

ECSC-3 is made in the USA and manufactured under Western Green's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness.

Material Content	
Matrix	Straw / Coconut
Netting	Top Net: Heavyweight, UV Stable Middle Net: Ultra-Heavyweight, UV stable Bottom Net: Heavyweight, UV stable
Thread	Synthetic, UV Stable

Standard Roll Sizes				
Width	8 ft	(2.4 m)	16 ft	(4.9 m)
Length	112 ft	(34.1 m)	112 ft	(34.1 m)
Weight ± 10%	92 lb	(41.7 kg)	184.0 lb	(83.5 kg)
Area	100 SY	(83.6 m^2)	200 SY	(167.2 m^2)

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 5.C / ECTC: Type 5.C
TTI Approvals	Class II, Type H
NTPEP Number	ECP-2022-02-014

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.34 in. (9 mm)
Mass/Unit Area	ASTM D6566	14.0 oz/sy (475 g/sm)
Tensile Strength – MD	ASTM D6818	700 lbs/ft (10.2 kN/m)
Tensile Strength – TD	ASTM D6818	625 lbs/ft (9.1 kN/m)
Elongation - MD	ASTM D6818	20%
Elongation – TD	ASTM D6818	20%
UV Stability	ASTM D4355	80% @1000 hr
Light Penetration	ASTM D6567	7%
Biomass Improvement	ASTM D7322	400%
Specific Gravity	ASTM D792	57.4 lb/ft^3 (0.92 g/cm^3)
Porosity	ECTC	N/A

Design Parameters		
Property	**Unvegetated**	**Vegetated[3]**
RUSLE C Factor[2]	0.05	N/A
Slope Maximum Gradient[1]	0.5H:1V	0.5H:1V
Permissible Shear Stress[2]	2.3 psf (110 Pa)	10.0 psf (480 Pa)
Permissible Velocity[2]	11.0 fps (3.4 m/s)	15.0 fps (4.6 m/s)
τ_{veg} / τ_{TRM} (HEC-15)	N/A	0.67

Manning's n Roughness (HEC-15)		
τ_{lower}	τ_{mid}	τ_{upper}
0.021	0.024	0.025

1 Maximum Gradient a recommendation for typical installations.
2 Hydraulic thresholds compliant with ASTM D6459/D6460 but generalized for typical applications.
3 Vegetated values dependent on established stand of vegetation

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Scan for additional and updated product information, or click here.

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