Carthage Mills **Product Data**

Geotextiles | Erosion Control | Geogrids | Geomembranes

ECP-3 Triple Net Polypropylene Turf Reinforcement Mat

DESCRIPTION

ECP-3 consists of a machine produced, 100% green polypropylene 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. ECP-3 is intended for slope or channel erosion control applications needing permanent functionality.

ECP-3 is made in the USA.

Material Content	
Matrix	Synthetic Fiber
Netting	Top Net: Ultra-heavyweight, UV stable Middle Net: Ultra-heavyweight, UV stable Bottom Net: Ultra-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%	125 lb	(56.7 kg)	250.0 lb	(113.4 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: 5.D
TTI Approvals	Class II, Type H
NTPEP Number	ECP-2018-03-015

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Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.38 in.	(10 mm)
Mass/Unit Area	ASTM D6566	18.5 oz/sy	(625 g/sm)
Tensile Strength – MD	ASTM D6818	1,000 lbs/ft	(14.6 kN/m)
Tensile Strength – TD	ASTM D6818	1,000 lbs/ft	(14.6 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	20%	
UV Stability	ASTM D4355	90% @1000 hr	
Light Penetration	ASTM D6567	15%	
Biomass Improvement	ASTM D7322	400%	
Specific Gravity	ASTM D792	57.4 lb/ft^3	(0.92 g/cm^3)
Porosity	ECTC	93%	

Design Parameters		
Property	**Unvegetated**	**Vegetated[3]**
RUSLE C Factor	0.03	N/A
Slope Maximum Gradient[1]	0.5H:1V	0.5H:1V
Permissible Shear Stress[2]	3.3 psf (160 Pa)	14.0 psf (670 Pa)
Permissible Velocity[2]	12.0 fps (3.7 m/s)	20.0 fps (6.1 m/s)
τ_{veg} / τ_{TRM} (HEC-15)	N/A	0.65

Manning's n Roughness (HEC-15)		
τ_{lower}	τ_{mid}	τ_{upper}
0.035	0.027	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

Effective 12/2025

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