



ECTC Classification	Slope Application Maximum Gradient	Product Description
5D	0.5:1 (H:V)	Turf Reinforcement Mat

Product Name	Company Name	Material Composition	Performance Test Unvegetated Shear Stress ^{b, c, d} <i>Typical</i> ASTM D6460	Performance Test Vegetated Shear Stress ^{c, d, e, f} <i>Typical</i> ASTM D6460	Seedling Emergence <i>Typical</i> ASTM D7322	Index Value at Time of Manufacture				
						Tensile Strength MD ^{d, f} <i>Typical</i> ASTM D6818	Tensile Strength TD ^{d, f} <i>Typical</i> ASTM D6818	Material Mass / Unit Area ^d <i>Typical</i> ASTM D6566	Thickness ^d <i>Typical</i> ASTM D6525	UV Stability ^{d, f} <i>Typical</i> ASTM D4355
Turf Reinforcement Mat	n/a	A product composed of UV-stabilized non-degradable synthetic fibers, filaments, nets, wire mesh and/or other elements, processed into a permanent, three-dimensional matrix which may be supplemented with degradable components.	≥ 2.0 lbs/ft ² (96 Pa)	≥ 12.0 lbs/ft ² (575 Pa)	≥ 250 %	≥ 325 lbs/ft (>4.8 kN/m)	≥ 225 lbs/ft (>3.3 kN/m)	≥ 8.0 lbs/yd ² (≥ 271 g/m ²)	≥ 0.25 in (≥ 6.35 mm)	≥ 80% @ 1,000 hrs
TriNet Coconut	American Excelsior Company	Biocomposite TRM	3.2 lbs/ft ²	12 lbs/ft ²	≥ 250	712 lbs/ft	703 lbs/ft	0.69 lbs/yd ²	0.264 in	90

- a. For material Types 5.E and 5.F, property values tested per ASTM 6818 and D6525 are reported as minimum average roll values (MARVs). MARVs are calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any samples taken from quality assurance testing will exceed the value reported.
 - b. Required minimum shear stress TRM (unvegetated) can sustain without physical damage or excess erosion (> 12.7 mm (0.5 in) soil loss) during successive, minimum 30 minute flow events in large scale testing.
 - c. Acceptable large-scale testing protocol may include ASTM D6460, or other independent testing deemed acceptable by the engineer. Large scale performance testing typically involved limited soil types and vegetative stands, therefore it is recommended that an appropriate factor of safety be used in design and product selection (see Guidance Document for further information).
 - d. Typical values are calculated as the average value. Statistically, it yields a 50 % degree of confidence that any samples taken from quality assurance testing will exceed the value reported.
 - e. Required minimum shear stress TRM (fully vegetated) can sustain without physical damage or excess erosion (> 12.7 mm (0.5 in.) soil loss) during successive, minimum 30 minute flow events in large scale testing.
 - f. For TRMs containing degradable components, property values must be obtained on the non-degradable portion of the matting alone.
- NOTE: TRMs are typically used in hydraulic applications, such as high flow ditches and channels, steep slopes, stream banks, and shorelines, where erosive forces may exceed the limits of natural, unreinforced vegetation or in areas where limited vegetation establishment is anticipated.