



## TE-P42

### TURF REINFORCEMENT MAT

The Titan Environmental Containment's **TE-P42** is a turf reinforcement mat made of 100% polypropylene fiber (green or tan) designed for critical slope and channel applications requiring permanent erosion control and turf reinforcement. The matting is sewn together on 1.5 inch (38.1 mm) centers. The **TE-P42** meets all requirements established in the FHWA FP-03 as a Type 5 A, B, and C turf reinforcement matting for use on slopes with gradients up to 0.5:1 (h:v) and has been tested by the National Transportation Product Evaluation Program (NTPEP). The **TE-P42** comes packaged in clear shrink-wrap with a blue band and includes installation instructions.

#### Product Nomenclature & Properties

- P** = 100% polypropylene fiber matrix
- 4** = polypropylene fiber matrix applied at a rate of 0.75 lbs/yd<sup>2</sup> (400 g/m<sup>2</sup>)
- 2** = top permanent UV stabilized black net with a mesh size of 0.53 x 0.5 in (1.34 x 1.27 cm)  
= bottom permanent UV stabilized black net with a mesh size of 0.626 x 0.626 in (1.59 x 1.59 cm)  
= permanent UV stabilized black thread

#### Index & Bench Scale Testing

Test Description	Test Method	Test Results
Mass per Unit Area	ASTM D6475	10.56 oz/yd <sup>2</sup>
UV Stability at 500 hours	ASTM D 4355	96%
Tensile Strength	ASTM D6818	28.9 lb/in @ 20.0% MD 21.8 lb/in @ 20.9% TD
Thickness	ASTM D6525	0.34 in
Light Penetration / Ground Cover	ASTM D6567	20% / 80%
Unvegetated Bench-Scale Rain Splash and Runoff (not to be used as a design value)	ASTM D7101	Soil Loss Ratio* = 6.29 Soil Loss Ratio* = 6.05 Soil Loss Ratio* = 5.81
Unvegetated Bench-Scale Shear Stress (not to be used as a design value)	ASTM D7207	3.07 lbs/ft <sup>2</sup> @ ½ in. soil loss
Seed Germination and Plant Growth Under Bench-Scale Conditions	ASTM D7322	508% Improvement (increase biomass)

\*Soil Loss Ratio = Soil Loss Bare Soil / Soil Loss with RECP = 1 / C-Factor (Note: Soil loss is based on regression analysis)

#### Design Values

- "C" factor = 0.001
- Unvegetated Maximum Permissible Shear Stress = 3.20 lbs/ft<sup>2</sup> (166 Pa)
- Vegetated Maximum Permissible Shear Stress = 10.0 lbs/ft<sup>2</sup> (480 Pa)
- Maximum Flow Velocity Unvegetated = 10 ft/s (3.0 m/s)
- Maximum Flow Velocity Vegetated = 16 ft/s (4.9 m/s)
- Unvegetated Manning's "n" = 0.03 (The hydraulic roughness coefficient will vary for vegetated conditions based on vegetation stand height and density)

#### Standard Roll Details

Width	2.44m (8ft)	4.88m (16ft)
Standard Length	25.7m (84.3ft)	25.7m (84.3ft)
Area	62.7m <sup>2</sup> (75yd <sup>2</sup> )	125.4m <sup>2</sup> (150yd <sup>2</sup> )
Weight ±10%	28kg (61lb)	56kg (122lb)

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