Erosion Protection

ADS PP5-10 TURF REINFORCEMENT MAT GEOTEXTILE SPECIFICATION

Scope

This specification describes ADS PP5-10 Turf Reinforcement Mat.

Turf Reinforcement Mat Requirements

ADS PP5-10 is composed of 100% synthetic green fibers mechanically (stitch) bound between two UV stabilized, synthetic nets. Stitching is secured on 2" (50 mm) centers using UV stabilized, synthetic thread. PP5-10 is a permanent, three-dimensional TRM that provides immediate erosion protection and long-term turf reinforcement and is intended for applications requiring erosion protection for greater than 36 months.

Each roll of ADS PP5-10 is manufactured in the USA and manufactured under Western Green's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness.

Turf Reinforcement Mat Properties

Table 1 - Verified Values

Property	Test Method	Unit	Value
Thickness	ASTM D6525	in. (mm)	0.38 (10)
Mass per Unit Area	ASTM D6566	oz/sy (g/m)	10.0 (350)
Tensile Strength	ASTM D6818	lbs/ft (kN/m)	325 (4.7) MD; 225 (3.3) TD
Elongation	ASTM D6818	%	25 MD, 30 TD
UV Stability	ASTM D4355	%	80 @ 1000 hours
Light Penetration	ASTM D6567	%	25
Biomass Improvement	ASTM D7322	%	400
Specific Gravity	ASTM D792	lb/ft^2 (gm/cm^2)	57.4 (0.92)
Porosity	ECTC	%	96

Table 2 - Netting

Top Net	Synthetic, UV Stable
Bottom Net	Synthetic, UV Stable

Table 3 - Roll Dimensions

Roll Size - ft (m)	8/16 x 112 (2.4/4.8 x 34)
Coverage - yd^2 (m^2)	100/200 (83.6/167.0)
Roll Weight - lbs (kg)	63/126 (29.0/28.6)

Table 4 - Design Parameters

Property	Unvegetated	Vegetated
RUSLE C Factor	0.03	N/A
Slope Maximum Gradient	0.5H:1V	0.5H:1V
Permissible Shear Stress	2.3 psf (110 Pa)	12.0 psf (575Pa)
Permissible Velocity	8.0 fps (2.4 m/s)	18.0 fps (5.5 m/s)
T_{veg}/T_{TRM} (HEC-15)	N/A	0.67

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.

Advanced Drainage Systems, Inc.