



## ADS PP5-HD TURF REINFORCEMENT MAT GEOTEXTILE SPECIFICATION

### Scope

This specification describes ADS PP5-HD Turf Reinforcement Mat.

### Turf Reinforcement Mat Requirements

ADS PP5-HD is a High-Performance Turf Reinforcement Mat (HP-TRM) produced by weaving 100% UV-stabilized, high denier synthetic mono-filament yarns woven into permanent, high-strength, three-dimensional structure. The optimized properties of the material provide immediate erosion control with excellent vegetation establishment and long-term turf reinforcement. The strength, resiliency and durability of PP5-HD provides a decades long design life and suitability for harsh environments, including debris flow and light vehicle traffic. When incorporated with high-load anchors, PP5-HD can add strength to sub-surface soil and improve slope stability.

**Table 1 - Turf Reinforcement Mat Properties**

Property	Test Method	Unit	Value
Thickness	ASTM D6525	in. (mm)	0.30 (6)
Mass per Unit Area	ASTM D6566	oz/sy (g/m)	7.5 (250)
Tensile Strength	ASTM D6818	lbs/ft (kN/m)	3,000 (43.8) MD; 3,000 (43.8) TD
Elongation	ASTM D6818	%	25 MD, 25 TD
UV Stability	ASTM D4355/D7238	%	90 @ 3000 hours
Resiliency	ASTM D6524	%	70
Light Penetration	ASTM D6567	%	35
Biomass Improvement	ASTM D7322	%	300
Specific Gravity	ASTM D792	lb/ft <sup>2</sup> (gm/cm <sup>2</sup> )	57.4 (0.92)
Porosity	ECTC	%	96
Carbon Footprint	GHG	kg CO <sub>2</sub> e/m <sup>2</sup>	1.3

**Table 2 - Packaging**

Roll Dimensions (W x L) - ft. (m)	8 x 135 (2.4 x 40.5)/11.5 x 78 (3.5 x 24.0)
Area yds <sup>2</sup> (m <sup>2</sup> )	120 (100.0)/100 (83.6)
Weight ±10% lb (kg)	86 (40)/72 (33)

**Table 3 - Design Parameters**

Property	Unvegetated	Vegetated <sup>3</sup>
RUSLE C Factor <sup>2</sup>	N/A	N/A
Slope Maximum Gradient <sup>1</sup>	0.5H:1V	0.5H:1V
Permissible Shear Stress <sup>2</sup>	2.3 psf (123 Pa)	14.0 psf (670 Pa)
Permissible Velocity <sup>2</sup>	8.0 fps (2.7 m/s)	20.0 fps (6.1 m/s)
$T_{veg}/T_{TRM}$ (HEC-15)	N/A	0.35

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.
- PP5-HD is a woven product, thus no netting is utilized in the construction of the material.