

MATERIAL PROPERTY DATA SHEET

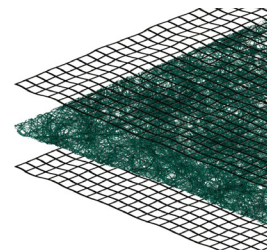


EXCEL PP5-8™

Permanent • Double Net • Poly-Fiber Matrix •
Turf Reinforcement Mat

DESCRIPTION

Excel PP5-8 Turf Reinforcement Mat (TRM) is composed of 100% synthetic green fibers mechanically (stitch) bound between two UV stabilized, synthetic nets. Stitching is secured on two-inch centers using UV stabilized, synthetic thread. Excel PP5-8 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 thirty-six months.



Each roll of Excel PP5-8 is made in the USA and manufactured under Western Green's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness.

Material Content	
Matrix	Synthetic Fibers
Netting	Top Net: Mediumweight, UV stable Bottom Net: Mediumweight, UV stable
Thread	Synthetic, UV Stable

Standard Roll Sizes				
Width	8 ft	(2.4 m)	16 ft	(4.9 m)
Length	112 ft	(34.0 m)	112 ft	(34.0 m)
Weight ± 10%	59 lb	(27.0 kg)	118 lb	(54.0 kg)
Area	100 sy	(83.6 m ²)	200 SY	(167.0 m ²)

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 5.B / ECTC Type 5.B
TTI Approvals	Class 2 Type H
NTPEP Number	ECP-2020-01-008

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Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.30 in.	(8 mm)
Mass/Unit Area	ASTM D6566	8.0 oz/sy	(275 g/sm)
Tensile Strength – MD	ASTM D6818	300 lbs/ft	(4.4 kN/m)
Tensile Strength – TD	ASTM D6818	200 lbs/ft	(2.9 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	30%	
UV Stability	ASTM D4355	80% @1000 hr	
Light Penetration	ASTM D6567	30%	
Biomass Improvement	ASTM D7322	400%	
Specific Gravity	ASTM D792	57.4 lb/ft ³	(0.92 g/cm ³)
Porosity	ECTC	96%	

Design Parameters		
Property	Unvegetated	Vegetated ³
RUSLE C Factor ²	0.10	N/A
Slope Maximum Gradient ¹	1H:1V	1H:1V
Permissible Shear Stress ²	2.0 psf (95 Pa)	8.0 psf (385 Pa)
Permissible Velocity ²	7.0 fps (2.1 m/s)	12.0 fps (3.7 m/s)
τ_{veg} / τ_{TRM} (HEC-15)	N/A	0.67

Manning's n Roughness (HEC-15)

τ_{lower}	τ_{mid}	τ_{upper}
0.031	0.030	0.029

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

Rev. 4.2023

Scan for additional and updated product information, or [click here](#).





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GEOSYNTHETICS

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GEOSYNTHETICS

Filter Fabrics

Stabilization Fabrics

Geogrids

- Road Grids
- Wall Grids
- Slope Stabilization

Specialty Fabrics

Composite Geomembranes

- GCLs, PVC, HDPE, LLDPE, EPDM, Granular Bentonite

SEDIMENT CONTROL

Inlet Protection

- Grated Inlet, Curb Inlet, Area Inlet Protection

Ditch Checks

- Triangle Silt Dike
- GeoRidge

Perimeter Protection

- High and Low-Porosity Silt Fence, Straw Wattles, Silt Socks
- Safety Fence

Flocculants & Water Treatment

- Polymer-Based & Natural Flocculants

Sediment Basin Skimmers

Dewatering Bags

Trackout Control

- FODS
- Rumble Grates

Turbidity Curtains

EROSION CONTROL

Basic Hydraulically Applied Mulches

- Wood
- Paper
- Blends
- Straw

High-Performance Hydraulically

Applied Products

- BFM
- FGM
- Additives & Tackifiers

Temporary Erosion Control Blankets

- Coir & Jute Mat/Nettings
- Short-Term ECBs
- Extended-Term ECBs

Permanent Erosion Control Blankets

- Turf Reinforcement Mats
- HP-TRMs
- Anchor Reinforced Vegetation System

Structural BMPs

- Transition Mats
- Geoweb Cellular Confinement
- Composite Vegetated Armor System
- Flex MSE Vegetated Wall System
- Articulated Concrete Block
- Gabions
- Grout-Filled Geotextile Mats

Vegetation Establishment

- Native Seed & Turf Seed
- Fertilizers
- Organic Soil Additives
- Stratavault Soil Cells

STORMWATER MANAGEMENT

Water Quality

- Inlet Filter Boxes
- Pre-Treatment Chamber
- Nutrient Separating Baffle Boxes
- High-Flow Biofiltration Media
- Hydrodynamic Separators
- Stratavault

Water Quantity

- Modular Underground Storage Systems
- Chamber Detention Systems

Drainage

- HDPE Swale Liner
- Pipe & Fittings
- Drainage Composites
- Strip Drain

Inlet Structures

- PVC
- Drain Basins, In-Line Drains
- Landscape

Permeable Pavers

- Permeable Articulating Concrete Block
- Grass Pavers
- Gravel Pavers
- Concrete Pavers

SPECIALTY

Natural & Synthetic Coir Fiber Logs

Vegetated Reinforced Soil Slopes

Soil Anchors

Root Barrier System

AquaBlok

Muscle Wall

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