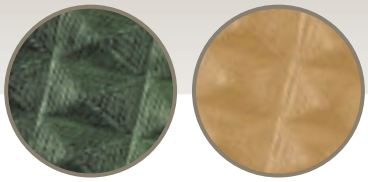
PYRAMAT® HIGH PERFORMANCE TURF REINFORCEMENT MATS



Pyramat High Performance Turf Reinforcement Mats (HPTRMs) feature our patented X3® fiber technology uniquely designed to lock soil in place. These mats are composed of a unique three-dimensional matrix of polypropylene yarns woven into a uniform, dimensionally stable and homogenous configuration of pyramid-like structures. HPTRMs exhibit very high tensile strength as well as superior interlock and reinforcement capacity with both soil and root systems. They are especially designed for the toughest erosion applications where permanent solutions are required, including steep slopes, arid and semi-arid environments, pipe inlets and outlets, high-flow channels or areas where greater factors of safety are desired.

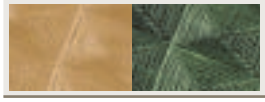
FEATURES & BENEFITS

- Ideal for extended ultraviolet (UV) exposure, utility cuts, maintenance equipment traffic, pipe inlets and outlets and other high vehicular loadings
- Pyramid structure featuring X3® fiber technology delivers higher sediment capture and retention capabilities
- X3 cross-sectional area for additional tensile strength and flexibility
- Holds seed and soil in place on channels and slopes while vegetation grows
- Provides permanent reinforcement to enhance vegetation's natural ability to filter soil particles and prevent soil loss during storm events
- Vegetation solution providing more pleasing aesthetics than conventional methods (i.e. rock riprap and concrete paving)
- Flexibility allows mat to conform to subgrade easier
- Superior product testing and performance

Outperforms and is more cost-effective than conventional erosion control methods, including:

- **Riprap 24 in (60 cm) and larger**
- **Grouted riprap**
- **Gabions**
- **Concrete paving**
- **Hard roadside shoulders**
- **Articulated concrete blocks**
- **Fabric formed revetments**

PYRAMAT® HPTRMs PRODUCT FAMILY TABLE

PRODUCT		FUNCTIONAL LONGEVITY	COLOR	FIBER TYPE	# OF NETS	FP-03, SECTION 713 COMPLIANCE
	PYRAMAT®	PERMANENT	TAN OR GREEN	POLYPROPYLENE X3® FIBER TECHNOLOGY	0 (WOVEN)	EXCEEDS TYPE 5C

PROPEX GEOSYNTHETICS | THE ADVANTAGE CREATORS.™

PYRAMAT® HIGH PERFORMANCE TURF REINFORCEMENT MATS

APPLICATION RECOMMENDATIONS FOR PYRAMAT® HPTRMs

	APPLICATION	FUNCTIONAL LONGEVITY	PRODUCT STYLE	INSTALLED COST[1]	ANCHOR RECOMMENDATIONS
SLOPES	1H:1V OR STEEPER	PERMANENT	PYRAMAT®	$12.00-18.00/yd² $14.35 - 21.53/m²	2.5 ANCHORS/yd² 3 ANCHORS/m²
CHANNELS	SHEAR STRESS UP TO 15 lb/ft² (718 N/m²) VELOCITY UP TO 25 ft/sec (7.6 m/sec)				
BANKS	MODERATE WAVE ACTION = 1-2 ft (30 - 60 cm)				
CRITICAL STRUCTURES	PIPE INLETS & OUTLETS				

NOTES: 1. Installed cost estimates range from large to small projects according to material quantity. The estimates include material, seed, labor and equipment. Costs vary greatly in different regions of the country.

KEY PHYSICAL PROPERTIES OF PYRAMAT® HPTRMs

- Construction: Patented three-dimensional woven matrix makes it 10 times stronger than traditional TRMs, with performance unequaled in turf reinforcement.
- Tensile Strength: 4000 lb/ft (58.4 kN/m) tensile strength meets U.S. EPA definition of a High Performance Turf Reinforcement Mat.
- UV Resistance: Patented UV protection package provides superior resistance to the damaging effects of ultraviolet radiation.

SEVEN STEPS FOR SUCCESSFUL TRM SELECTIONS*

1. SELECT APPLICATIONS
2. DETERMINE FUNCTIONAL LONGEVITY
3. ANTICIPATE CLIMATE (ARID, SEMI-ARID, OR TEMPERATE)
4. UNDERSTAND TRADITIONAL SOLUTION
5. PREDICT NON-HYDRAULIC STRESSES (MAINTENANCE STRESSES)
6. KNOW VEGETATION TYPE
7. CALCULATE HYDRAULIC STRESSES

*See Propex Engineering Bulletins or EC-DESIGN® software for more information.

PYRAMAT® HPTRM PROPERTY TABLE[1] ENGLISH & METRIC VALUES

	PROPERTY	TEST METHOD	VALUE[2]	PYRAMAT®
PHYSICAL	MASS PER UNIT AREA	ASTM D-6566	MARV	13.5 oz/yd^2 455 g/m^2
	THICKNESS	ASTM D-6525	MARV	0.4 in 10.2 mm
	LIGHT PENETRATION	ASTM D-6567	TYPICAL	10%
	COLOR	VISUAL	–	GREEN, TAN
MECHANICAL	TENSILE STRENGTH	ASTM D-6818	MARV	4000 x 3000 lb/ft 58.4 x 43.8 kN/m
	TENSILE ELONGATION	ASTM D-6818	MaxARV	65%
	RESILIENCY	ASTM D-6524	MARV	80%
	FLEXIBILITY/STIFFNESS	ASTM D-6575	TYPICAL	0.534 in-lbs 615000 mg-cm
ENDURANCE	FUNCTIONAL LONGEVITY	OBSERVED	TYPICAL	PERMANENT
DURABILITY	UV RESISTANCE[4] @ 6000 HOURS	ASTM D-4355	MINIMUM	90%
PERFORMANCE	SEEDLING EMERGENCE[3]	ECTC DRAFT METHOD #4	TYPICAL	296%
PACKAGING	ROLL WIDTH	MEASURED	TYPICAL	8.5 ft 2.6 m
	ROLL LENGTH	MEASURED	TYPICAL	90 ft 27.4 m
	ROLL WEIGHT	CALCULATED	TYPICAL	86 lb 39 kg
	ROLL AREA	MEASURED	TYPICAL	85 yd^2 71 m^2

NOTES: 1. The listed property values are effective 08/2006 and are subject to change without notice. 2. MARV indicates Minimum Average Roll Value calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any sample taken during quality assurance testing will exceed the reported value. Maximum Average Roll Values (MaxARV) is calculated as typical plus two standard deviations. 3. Calculated as percent increase in average plant biomass with tall fescue grass seed in sand 14 days after seeding versus a non-RECP protected control specimen. 4. All components must meet UV resistance values.

PYRAMAT® HPTRM PERFORMANCE VALUES ENGLISH & METRIC UNITS

MATERIAL	FUNCTIONAL LONGEVITY	SHORT-TERM MAXIMUM SHEAR STRESS AND VELOCITY						MANNING'S "n"		
		VEGETATED[5]		PARTIALLY[6] (30%/70%)		UNVEGETATED[7]		0"-6"	6"-12"	12"-24"
PYRAMAT®	PERMANENT	15 lb/ft^2 718 N/m^2	25 ft/sec 7.6 m/sec	10 lb/ft^2 478 N/m^2	20 ft/sec 6.1 m/sec	6.0-8.0 lb/ft^2 285-383 N/m^2	15 ft/sec 4.6 m/sec	0.035	0.028	0.017

NOTES: 5. Maximum permissible shear stress has been obtained through fully vegetated testing programs featuring specific soil types, vegetation classes, flow conditions and failure criteria. Achieved after only 14 weeks of vegetative establishment versus the industry standard of two full growing seasons. These conditions may not be relevant to every project nor are they replicated by other manufacturers. Please contact Propex for further information. 6. Maximum permissible shear stress has been obtained through partially vegetated (i.e.–less than 70% coverage) testing programs featuring specific soil types, vegetation classes, flow conditions and failure criteria. These conditions may not be relevant to every project nor are they replicated by other manufacturers. Please contact Propex for further information. 7. Bench scale tests are index property tests performed with sand in an unvegetated condition. These tests are not indicative of field performance and therefore should not be used in design to establish performance levels for rolled erosion control products.

For downloadable documents like construction specifications, installation guidelines, case studies and other technical information, please visit our web site at **geotextile.com**. These documents are available in easy-to-use Microsoft® Word formats.

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