

# TerraTex® HPG-HM28

TerraTex® geotextiles are made up of high tenacity polypropylene yarns. These yarns are woven to form a stable and durable network such that the yarns retain their relative position. They are non-biodegradable and resistant to most soil chemicals, acids, and alkali with a pH range of 3 to 12. Unless noted otherwise, all values are minimum average roll values (MARV).

Property	Test Method	English	Metric
M <sub>r</sub> Improvement Factor <sup>1</sup>	AASHTO T-307	1.32	1.32
Initial Tensile Stiffness (0.5% Strain XMD) <sup>2</sup>	ASTM D-4595	85,000 lbs/ft	1,240 kN/m
Wide Width Tensile (2% Strain XMD) <sup>2</sup>	ASTM D-4595	950 lbs/ft	13.9 kN/m
Wide Width Tensile (2% Strain MD) <sup>2</sup>	ASTM D-4595	570 lbs/ft	8.3 kN/m
Wide Width Tensile (5% Strain XMD) <sup>2</sup>	ASTM D-4595	2,100 lbs/ft	30.6 kN/m
Wide Width Tensile (5% Strain MD) <sup>2</sup>	ASTM D-4595	1,700 lbs/ft	24.8 kN/m
Cyclic Tensile Modulus @ 2% Permanent Strain: J <sub>cyclic</sub> MD	ASTM D-7556	54,500 lbs/ft	795 kN/m
Cyclic Tensile Modulus @ 2% Permanent Strain: J <sub>cyclic</sub> XMD	ASTM D-7556	68,500 lbs/ft	1,000 kN/m
Interaction Coefficient <sup>3</sup>	ASTM D-6706	0.9	0.9
Permittivity Under Load <sup>6</sup>	ASTM D-5493	0.5 sec <sub>-1</sub>	0.5 sec <sub>-1</sub>
Water Flow Rate Under Load <sup>6</sup>	ASTM D-5493	35 gal/min/sf	1,426 l/min/sm
Nominal Pore Size 0 <sub>95</sub> <sup>5</sup>	ASTM D-6767	490 microns	490 microns
Nominal Pore Size 0 <sub>85</sub> <sup>5</sup>	ASTM D-6767	450 microns	450 microns
Nominal Pore Size 0 <sub>60</sub> <sup>5</sup>	ASTM D-6767	360 microns	360 microns
Nominal Pore Size 0 <sub>50</sub> <sup>5</sup>	ASTM D-6767	320 microns	320 microns
Grab Tensile <sup>2</sup>	ASTM D-4632	500 x 325 lbs	2.2 x 1.4 kN
Grab Elongation <sup>2</sup>	ASTM D-4632	12 x 8 %	12 x 8 %
CBR Puncture <sup>2</sup>	ASTM D-6241	1,800 lbs	8.01 kN
Permittivity <sup>2,6</sup>	ASTM D-4491	0.9 sec <sub>-1</sub>	0.9 sec <sub>-1</sub>
Water Flow Rate <sup>2,6</sup>	ASTM D-4491	75 gal/min/sf	3,056 l/min/sm
AOS <sup>5,6</sup>	ASTM D-4751	40 US Std. Sieve	0.425 mm
UV Resistance	ASTM D-4355	90% @ 500 hrs % strength retained	90% @ 500 hrs % strength retained

1. Value determined from Composite Geosynthetic-Base Course Artificial Neural Network Model, TRB/NCHRP Project 01-50, "Quantifying the Influence of Geosynthetics on Pavement Performance" (2017), National Academy of Sciences catalog 24841, <http://nap.edu/24841>. Subgrade M<sub>r</sub> improvement range 2.4 < CBR < 4.7 (4.6 < M<sub>r</sub> < 6.9), 4-inch HMA (300ksi), 10-inch ABC (20ksi), Base Anisotropic Ratio = 0.35, Factor of Safety 1.30.
2. Minimum average
3. Soil-Geosynthetic Interaction Coefficient based on testing conducted by TRI Environmental, Austin, TX
4. 140psf normal load to simulate roadway compression of geotextile porosity, testing conducted by TRI Environmental, Austin, TX
5. Maximum average
6. At the time of manufacturing. Handling, storage, and shipping may change these properties

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