Synteen Technical Fabrics, Inc.

SYNTEEN SF11 BIAXIAL GEOGRID

BASE COURSE REINFORCEMENT AND SUBGRADE IMPROVEMENT

SF11 is composed of high molecular weight, high tenacity multifilament polyester yarns, woven into a stable network placed under tension. The high strength polyester yarns are PVC coated and are inert to biological degradation and are resistant to naturally encountered chemicals, alkalis and acids.

REINFORCEMENT PROPERTIES		TEST METHOD	MARV VALUES Lbs/ft	 kN/m
Ultimate Strength	MD XMD	ASTM 6637	2,388 3,870	34.9 56.5
Initial Modulus	MD XMD	ASTM 6637	178,000 172,900	2,598 2,524
Tensile Strength at 2% Strain	MD XMD	ASTM 6637	526 578	7.7 8.4
Tensile Strength at 5% Strain	MD XMD	ASTM 6637	792 1,042	11.5 15.2
True in place strength after site damage testing based on TRI method of "installation" damage testing with poorly graded gravel (GP) and well groomed gravel (SW).				
True Tensile Strength at 2% Strain	MD (GP) MD (SW)	ASTM 6637 & ASTM 5818	401 490	5.9 6.6
True Tensile Strength at 2% Strain	XMD (GP) XMD (SW)	ASTM 6637 & ASTM 5818	521 570	7.6 8.3
True Tensile Strength at 5% Strain	MD (GP) MD (SW)	ASTM 6637 & ASTM 5818	604 740	8.8 10.8
ATrue Tensile Strength at 5% Strain	XMD (GP) XMD (SW)	ASTM 6637 & ASTM 5818	941 1,028	13.7 14.9
Junction Strength (lb./junction)	MD XMD	GRI-GG2	59.4 47.6	0.87 0.69
FHWA Sum of Junctions – Strength (81 total junctions)	MD XMD	GRI-GG2	4,811 3,856	70.2 56.2
FHWA Sum of Junctions – Efficiency	MD XMD	GRI-GG2	201% 100%	
Coefficient of Pullout Interaction		ASTM 6706 Sandy Gravel Sand	$C_i = 1.0$ $C_i = 1.0$	
UV Resistance at 500 hours (Strength retained)		ASTM D 4355	74%	
Aperture Size *	MD XMD	Measured	1.0 1.0	25 25
ARoll Dimensions 12' x 150' 15' x 150' 17' x 150'		Measured	 200 square yards per roll 250 square yards per roll 283 square yards per roll	

Synteen can produce custom widths, apertures and master roll lengths.

PLEASE NOTE: Flexural Stiffness based on ASTM D 5732 was withdrawn by ASTM in 2008, and is no longer recognized by ASTM D-35 as an acceptable geosynthetic test method.

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