



Synteen Technical Fabrics, Inc.



SYNTEEN SF12 BIAXIAL GEOGRID BASE COURSE REINFORCEMENT AND SUBGRADE IMPROVEMENT

SF12 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	ASTM 6637	2,388	34.9
	XMD		5,268	76.8
Initial Modulus	MD	ASTM 6637	178,000	2,598
	XMD		235,000	3,432
Tensile Strength at 2% Strain	MD	ASTM 6637	526	7.7
	XMD		797	11.6
Tensile Strength at 5% Strain	MD	ASTM 6637	1,042	15.2
	XMD		1,367	19.9
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)	ASTM 6637 & ASTM 5818	438	6.3
	MD (SW)		496	7.2
True Tensile Strength at 2% Strain	XMD (GP)	ASTM 6637 & ASTM 5818	664	9.7
	XMD (SW)		752	11.0
True Tensile Strength at 5% Strain	MD (GP)	ASTM 6637 & ASTM 5818	868	12.6
	MD (SW)		983	14.3
True Tensile Strength at 5% Strain	XMD (GP)	ASTM 6637 & ASTM 5818	940	13.7
	XMD (SW)		1,065	15.5
Junction Strength (lb./junction)	MD	GRI-GG2	59.4	0.87
	XMD		64.8	0.95
FHWA Sum of Junctions – Strength (81 total junctions)	MD	GRI-GG2	4,851	70.8
	XMD		5,249	76.6
FHWA Sum of Junctions – Efficiency	MD	GRI-GG2	203%	
	XMD		100%	
Coefficient of Pullout Interaction		ASTM 6706 Sandy Gravel Sand	<u>$C_i = 1.0$</u>	
			<u>$C_i = 1.0$</u>	
Aperture Size *	MD	Measured	1.0	25
	XMD		1.0	25
Roll 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PLEASE NOTE: Flexural Stiffness based on ASTM D 5732 was withdrawn by ASTM in 2008, and is no longer recognized by ASTM D-35 as an acceptable geosynthetic test method.