



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	ASTM 6637	2,388	34.9
	XMD		3,870	56.5
Initial Modulus	MD	ASTM 6637	178,000	2,598
	XMD		172,900	2,524
Load (Tensile Strength) at 2% Strain	MD	ASTM 6637	526	7.7
	XMD		578	8.4
2% Secant Moduli	MD	ASTM 6637	26,300	383.6
	XMD		28,900	421.5
Load (Tensile Strength) at 5% Strain	MD	ASTM 6637	792	11.5
	XMD		1,042	15.2
5% Secant Moduli	MD	ASTM 6637	15,840	231
	XMD		20,840	304
<b><i>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).</i></b>				
Load at 2% Strain	MD (GP)	ASTM 6637 & ASTM 5818	401	5.9
	MD (SW)		490	6.6
Load at 2% Strain	XMD (GP)	ASTM 6637 & ASTM 5818	521	7.6
	XMD (SW)		570	8.3
Load at 5% Strain	MD (GP)	ASTM 6637 & ASTM 5818	604	8.8
	MD (SW)		740	10.8
Load at 5 % Strain	XMD (GP)	ASTM 6637 & ASTM 5818	941	13.7
	XMD (SW)		1,028	14.9
Junction Strength (lb./junction)	MD	GRI-GG2	59.4	0.87
	XMD		47.6	0.69
FHWA Sum of Junctions – Strength (81 total junctions)	MD	GRI-GG2	4,811	70.2
	XMD		3,856	56.2
FHWA Sum of Junctions – Efficiency	MD	GRI-GG2	201%	
	XMD		100%	
Junction Strength (lb./junction)	MD	GRI-GG2	59.4	0.87
	XMD		47.6	0.69
Coefficient of Pullout Interaction		ASTM 6706 Sandy Gravel Sand	$C_i = 1.0$	
			$C_i = 1.0$	
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	

GP - Poorly Graded Gravel \* SW - Well Groomed Gravel

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