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Reinforcement Geogrids Comparison Sheet

BaseGrid 22

vs.

BX1100

More than strength is required for a geosynthetic to be effective as reinforcement for base and sub-base applications. The product must be able to effectively transfer its strength to the soil and also maintain its strength for the design life of the project. The following table compares the key material, strength, and performance characteristics of US Fabrics' BaseGrid 22 Geogrid to Tensar BX1100 Geogrid.

GEOSYNTHETIC PROPERTY [1]	TEST METHOD	UNIT	BaseGrid 22		BX1100[2]	
			MD	TD	MD	TD
Material Characteristics						
Polymer Type		-	Polypropylene		Polypropylene	
Structure		-	2 Layers of bi-oriented grids welded together		Single Layer of bi-oriented extruded geogrid	
PH Resistance		-	2 – 13		2 – 13	
Carbon Black Content	ASTM 4218	%	0.5		0.5	
Strength and Load Properties						
Ultimate Tensile Strength	ASTM D 6637	lb/ft	925	1,400	860	1,400
- True Tensile Strength @ 2% Strain	ASTM D 6637	lb/ft	301	450	280	450
- True Tensile Strength @ 5% Strain	ASTM D 6637	lb/ft	616	920	580	920
True Initial Modulus in Use	ASTM D 6637	lb/ft	17,140	27,420	17,125	27,400
- Tensile Modulus @ 2% Strain	ASTM D 6637	lb/ft	15,050	22,500	14,000	22,500
- Tensile Modulus @ 5% Strain	ASTM D 6637	lb/ft	12,320	18,400	11,600	17,800
Structural Integrity						
Flexural Rigidity	ASTM D 1388	Mg-cm	250,000	250,000	250,000	nr
Performance Characteristics						
Maximum Pullout Resistance [3] (Coefficient of Interaction)						
- @ 205 psf		lb/ft	-	650 (1.05)	-	520 (0.83)
- @ 410 psf		lb/ft	-	1,295 (1.03)	-	1,020 (0.82)
Maximum Rut Depth [4] (TEAL = 40,000 cycle)		in	- 0.827	0.827	0.827	0.827
Performance Characteristics						
Resistance to Installation Damage	ASTM D 5818	% [5]	>90/>90/90 [6]		90/83/70	

[1] Chart is for comparison purpose only. Consult your local US Fabrics' representative for design assistance.
[2] Per manufacturer's literature or GFR's "Specifier's Guide", latest data available and/or Tensar's website.
[3] Report GRID-TE-5: "Pullout Tests of Geogrids".
[4] Report GRID-TE-3: "Full Scale In-Ground Tests for Geosynthetic-Reinforced Flexible Paved Roads".
[5] Resistance to loss of load capacity or structural integrity — %SC (clayey sand)/%SW (well graded sand)/%GP (poorly graded gravel)
[6] Report GRID-TE-4: "Construction Damage Tests of Geogrids"