



Product Data 'Comparison Sheet'

■ MS™ 220 vs. BX1100

To be effective as reinforcement for base and sub-base applications, a geosynthetic product must not only be strong, it must be able to transfer its strength to the soil that it is reinforcing and maintain its strength for the design life of the project. The following table compares the key material, strength, and performance characteristics for the MS™ 220 geogrid to the Tensar BX1100.

PROPERTY ¹	TEST METHOD	UNIT	MS™ 220		BX1100 ²	
			MD	TD	MD	TD
<input type="checkbox"/> MATERIAL						
Polymer Type			Polypropylene		Polypropylene	
Structure			Two layers of bi-oriented geogrids sewn together		Single layer of extruded geogrid	
PH Resistance			2 – 13		2 – 13	
Carbon Black Content	ASTM D 4218	%	0.50		0.50	
<input type="checkbox"/> TECHNICAL / MECHANICAL						
Strengths and Load Capacity:						
Ultimate Tensile Strength	GRI-GG1	lb/ft	925	1,400	860	1,400
True Tensile Strength: @ 2% Strain			300	445	280	450
@ 5% Strain			615	890	580	920
True Initial Modulus In Use			15,513	24,674	15,170	24,685
Tensile Modulus: @ 2% Strain			15,000	22,260	15,000	22,260
@ 5% Strain	12,330	17,800	12,330	17,800		
Structural Integrity:						
Junction: Strength	GRI-GG2	lb/ft	835	1,315	765	1,170
Flexural Rigidity	ASTM D 1388	mg-cm	250,000		250,000	
Performance Characteristics:						
Maximum Pullout Resistance ³ (Coefficient of Interaction):		lb/ft				
@ 205 psf			650		460	
@ 410 psf			1,295		940	
Maximum Rut Depth ⁴ (TEAL = 40,000 cycles)		in.	0.827		0.980	
Durability:						
Resistance to Installation Damage	ASTM D 5818	% ⁵	> 90 / > 90 / 90 ⁶		90/83/70	

NOTES:

¹ Chart for comparison purpose only. Consult with us for current design assistance.

² Per manufacturer's literature, GFR's "Specifier's Guide", latest data available, and/or Tensar's website (http://www.tensarcorp.com/literature/content_spec_bx.htm).

³ Geogrid Report GRID-TE-5: "Pullout Tests of Geogrids".

⁴ Geogrid 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 Geogrid Report GRID-TE-4: "Construction Damage Tests of Geogrids".

The properties reported above are effective 02/01/03 and are subject to change without notice.