

Product Data Sheet – Biaxial Geogrid BX1120

Product Type:	Integrally Formed Biaxial Geogrid
Polymer:	Polypropylene
Load Transfer Mechanism:	Positive Mechanical Interlock
Primary Applications:	Mechanical Stabilized Earth Walls, Reinforced Slopes, & Long-Term Load Support Applications

This product has been tested for quality control purposes in a GAI-LAP accredited laboratory, it is part of the AASHTO SSGEO Product Evaluation and Audit Solutions program (formerly known as NTPEP), and it is made in the USA.

Product Properties

Index Properties	Units	MD Values ¹	XMD Values ¹
• Aperture Dimensions ²	mm (in)	25 (1.0)	33 (1.3)
• Tensile Strength @2% Strain ³	kN/m (lb/ft)	4.1 (280)	6.6 (450)
• Tensile Strength @5% Strain ³	kN/m (lb/ft)	8.5 (580)	13.4 (920)
• Ultimate Tensile Strength ³	kN/m (lb/ft)	12.4 (850)	19.0 (1,300)
• Flexural Stiffness ⁴	mg-cm	250,000	
• Carbon Black Content	%	2.0	
Durability			
• Resistance to Long Term Degradation ⁵	%	100	
• Resistance to UV Degradation ⁶	%	100	
Load Capacity			
• Maximum Allowable (Design) Strength for 100-year Design Life ⁷	kN/m (lb/ft)	3.89 (267)	
Recommended Allowable Strength Reduction Factors			
• Reduction Factor for Installation Damage ⁸		1.05	
• Reduction Factor for Creep ⁹		4.64	
• Reduction Factor for Durability		1.00	

Dimensions and Delivery

The biaxial geogrid shall be delivered to the job site in roll form with each roll individually identified and nominally measuring 12.5 feet (3.8 meters) in width and 246 feet (75 meters) in length, or 9.8 feet (3.0 meters) in width and 164 feet (50 meters) in length.

Notes

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02.
2. Nominal dimensions.
3. Determined in accordance with ASTM D6637-11 Method A.
4. Resistance to bending force determined in accordance with ASTM D7748/D7748M-14.
5. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
6. Resistance to loss of load capacity or structural integrity when subjected to 4,500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-21.
7. Reduction factors are used to calculate the geogrid strength available for resisting force in long-term load bearing applications. Allowable Strength (T_{allow}) is determined by reducing the ultimate tensile strength (T_{ult}) by reduction factors for installation damage (RF_{ID}), creep (RF_{CR}) and chemical/biological durability ($RF_D = RF_{CD} \cdot RF_{BD}$) per GRI-GG4-05 [$T_{allow} = T_{ult} / (RF_{ID} \cdot RF_{CR} \cdot RF_D)$]. Recommended minimum reduction factors are based on product-specific testing. Project specifications, standard public agency specifications and/or design code requirements may require higher reduction factors. Design of the structure in which the geogrid is used, including the selection of appropriate reduction factors and design life, is the responsibility of the outside licensed professional engineer providing the sealed drawings for the project.
8. Minimum value is based on installation damage testing in sand, silt and clay soils. Coarser soils require increased RF_{ID} values.
9. Test per ASTM D5262, for a minimum of 10,000 hours at 10% strain and extrapolated to a 100-year time period.

Tensar reserves the right to change its Product Data Sheet at any time. It is the responsibility of the person specifying the use of this product and of the purchaser to ensure that Product Data Sheet relied upon for procurement purposes are current and that the product is suitable for its intended use in each instance.