



# ■ GBX<sup>®</sup>-11 (Type 1) Biaxial Geogrid

**Product Type:** Integrally Formed Biaxial Geogrid  
**Polymer:** Polypropylene  
**Load Transfer Mechanism:** Positive Mechanical Interlock  
**Primary Applications:** Base Reinforcement, Subgrade Improvement



<b>PRODUCT PROPERTIES</b>			
<b>■ Index Properties</b>	<b>Units</b>	<b>MD Values<sup>1</sup></b>	<b>XMD Values<sup>1</sup></b>
Aperture Dimensions <sup>2</sup>	mm (in)	25 (1.0)	33 (1.3)
Minimum Rib Thickness <sup>2</sup>	mm (in)	0.76 (0.03)	0.76 (0.03)
Tensile Strength @ 2% Strain <sup>3</sup>	kN/m (lbs/ft)	4.1 (280)	6.6 (450)
Tensile Strength @ 5% Strain <sup>3</sup>	kN/m (lbs/ft)	8.5 (580)	13.4 (920)
Ultimate Tensile Strength <sup>3</sup>	kN/m (lbs/ft)	12.4 (850)	19.0 (1,300)
<b>■ Structural Integrity</b>			
Junction Efficiency <sup>4</sup>	%	93	
Flexural Stiffness <sup>5</sup>	mg-cm	250,000	
Aperture Stability (J) <sup>6</sup>	@ 20 cm-kg	m-N/deg	0.32
	@ 5 cm-kg	Kg-cm/deg	12.5
<b>■ Durability</b>			
Resistance to Installation Damage <sup>7</sup>	%SC / %SW / %GP	95 / 93 / 90	
Resistance to Long Term Degradation <sup>8</sup>	%	100	
Resistance to UV Degradation <sup>9</sup>	%	100	
<b>■ Dimensions/Weight</b>			
Call for Roll Sizes			

**Notes:**

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D 4759-02.
  2. Nominal dimensions.
  3. True resistance to elongation when initially subjected to load determined in accordance with ASTM D 6637-01 without deforming test materials under load before measuring such resistance or employing "secant" or "offset" tangent methods of measurement so as to overstate tensile properties.
  4. Load transfer capability determined in accordance with GRI-GG2-05 and expressed as a percentage of ultimate tensile strength.
  5. Resistance to bending force determined in accordance with ASTM D 5732-01. The overall Flexural Stiffness is calculated as the square root of the product of MD and XMD Flexural Stiffness values.
  6. Resistance to in-plane rotational movement measured by applying a 20.0 kg-cm (2 m-N) moment to the central junction of a 9 inch x 9 inch specimen restrained at its perimeter in accordance with U.S. Army Corps of Engineers Methodology for measurement of Torsional Rigidity. (Note that TriAx geogrids only report this value as kg-cm @ 5.0 cm-kg.)
  7. Resistance to loss of load capacity or structural integrity when subjected to mechanical installation stress in clayey sand (SC), well graded sand (SW), and crushed stone classified as poorly graded gravel (GP). The geogrid shall be sampled in accordance with ASTM D 5818-06 and load capacity shall be determined in accordance with ASTM D 6637-01.
  8. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments.
  9. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering.
- The properties reported above are effective 12-01-22 and are subject to change without notice.

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