

# LBO 440 Biaxial Geogrid

TENAX LBO 440 is a polypropylene geogrid especially designed for soil stabilization and reinforcement applications. LBO 440 geogrids are manufactured from a unique process of extrusion, and punched and drawn to biaxial orientation to enhance tensile properties. TENAX LBO 440 geogrids feature consistently high tensile strength and modulus, excellent resistance to construction damage, and environmental exposure.

### Typical Applications:

Soft soil stabilization, base reinforcement, embankments over soft soils, working platforms, haul roads

### PRODUCT PROPERTIES

Technical Characteristics	Units	MD Values <sup>1</sup>	XMD Values <sup>1</sup>
Aperture Dimensions <sup>2</sup>	mm (in)	35 (1.38)	45 (1.77)
Minimum Rib Thickness <sup>2</sup>	mm (in)	4.0 (0.16)	3.0 (0.12)
Tensile Strength @ 2% Strain <sup>3</sup>	kN/m (lb/ft)	14.0 (959)	15.0 (1,028)
Tensile Strength @ 5% Strain <sup>3</sup>	kN/m (lb/ft)	28.0 (1,919)	30.0 (2,056)
Ultimate Tensile Strength <sup>3</sup>	kN/m (lb/ft)	40.0 (2,741)	40.0 (2,741)

### STRUCTURAL INTEGRITY

Junction Efficiency <sup>4</sup>	%	93
Flexural Stiffness <sup>5</sup>	mg-cm	4,800,000
Aperture Stability <sup>6</sup>	m-N/deg	0.98

### DURABILITY

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

### DIMENSIONS AND DELIVERY

The biaxial geogrid shall be delivered to the job site in roll form with each roll individually identified and nominally measuring 4m (13.1-FT) in width and 50m (164-FT) in length.

### Notes

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-11.
2. Nominal dimensions.
3. Tensile Strength is determined in accordance with ASTM D6637-15 Method A.
4. Load transfer capability determined in accordance with ASTM D7737-15.
5. Resistance to bending force determined in accordance with ASTM D7748-14, using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs, and of length sufficiently long to enable measurement of the overhang dimension.
6. Resistance to in-plane rotational movement measured by applying a 20 kg-cm (2 m-N) moment to the central junction of a 9-IN x 9-IN specimen restrained at its perimeter in accordance with US Army Corps of Engineers Methodology for measurement of torsional rigidity.
7. Resistance to loss of load capacity or structural integrity when subjected to mechanical installation stress on 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 D5818-11 and load capacity shall be determined in accordance with ASTM D6637.
8. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
9. Resistance to loss of load capacity or structural integrity when subjected to ultraviolet light and aggressive weathering in accordance with ASTM D4355-14.

Tenax warrants that the geogrid products delivered hereunder conform to the stated specification at the time of delivery. All other warranties including claims for performance or suitability for application are excluded. This product specification supersedes all prior specifications for the product described above and is not applicable for products shipped before November 2014.