

Mirafi® BXG Geogrids for Base Course Reinforcement and Soil Stabilization Applications

TenCate develops and produces materials that deliver increased performance, reduce costs and measurable results when working with our customers to provide advanced solutions utilizing Mirafi® BXG geogrids that make a difference.

The Difference Mirafi® BXG Geogrids Make:

- **Reinforcement Strength.** High tensile modulus properties per ASTM D6637 for base reinforcement applications. For structures with dynamic short-term loadings, Mirafi® BXG geogrids offer high strength at low strain and are designed for maximum bearing capacity and shear resistance.
- **True biaxial strengths.** Mirafi® BXG geogrids are biaxial grids that exhibit high tensile strength in both longitudinal and transverse directions, making them suitable for base course reinforcement and soil stabilization applications.
- **Durability.** Superior damage resistance from moderate to severe stress installations.
- **Soil Interaction.** Superior soil confinement resulting in greater load distribution.

A new combination of grid structure and polymers to create optimum soil-grid interaction.

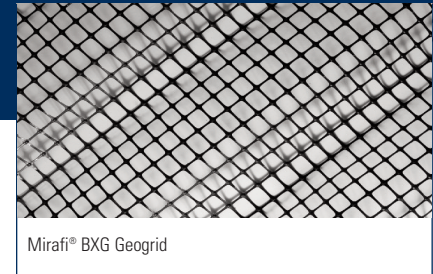
- **Roll Sizes.** Available in multiple roll sizes to fit the project requirements.

APPLICATIONS

Mirafi® BXG geogrids deliver strength, long-term performance, reliability and quick installation for base reinforcement for paved roads, construction haul roads, foundation reinforcement, working platforms on weak subgrades, and secondary reinforcement for soil retaining structures.

INSTALLATION GUIDELINES*

Prepare the ground by removing stumps, boulders, etc. and fill in low spots. Unroll the Mirafi® BXG geogrids directly over the ground to be stabilized. If more than one roll width is required, overlap rolls. Place the aggregate onto previously installed geogrid.



Maintain 6in (150mm) to 12in (300mm) cover between truck tires and geosynthetic. Compact the aggregate over the Mirafi® BXG geogrid to the design thickness and fill any ruts with new aggregate as specified in the project guidelines.

* These guidelines serve as a general basis for installation. Detailed instructions are available from your TenCate representative.



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| Mechanical Properties | Test Method | Units | BXG110 | | BXG120 | |
|--|-------------|---------------|------------|-------------|-------------|-------------|
| | | | MD | CD | MD | CD |
| Tensile Strength (at ultimate) ¹ | ASTM D6637 | lbs/ft (kN/m) | 850 (12.4) | 1300 (19.0) | 1310 (19.2) | 1970 (28.8) |
| Tensile Strength (at 2% strain) ¹ | ASTM D6637 | lbs/ft (kN/m) | 280 (4.1) | 450 (6.6) | 410 (6.0) | 620 (9.0) |
| Tensile Strength (at 5% strain) ¹ | ASTM D6637 | lbs/ft (kN/m) | 580 (8.5) | 920 (13.4) | 810 (11.8) | 1340 (19.6) |
| Junction Efficiency ² | | % | 93 | | 93 | |
| Flexural Stiffness ³ | | mg-cm | 250,000 | | 750,000 | |
| Aperture Stability ⁴ | | m-N/deg | 0.32 | | 0.65 | |
| Resistance to Installation Damage ⁵ | | % SC/%SW/GP | 95/93/90 | | 95/93/90 | |
| Resistance to Long Term Degradation ⁶ | | % | 100 | | 100 | |
| Resistance to UV Degradation ⁷ | | % | 100 | | 100 | |

| Physical Properties | Unit | BXG110 | | BXG120 | |
|----------------------------------|-----------------------------------|----------------------|-------------|-------------------|-------------|
| Rib Thickness | in(mm) | 0.03 (0.76) | 0.03 (0.76) | 0.05 (1.27) | 0.05 (1.27) |
| Grid Aperture Size (MD) | in (mm) | 0.9 (23.0) | | 1.0 (25.4) | |
| Grid Aperture Size (CD) | in (mm) | 1.3 (33.0) | | 1.3 (33.0) | |
| Roll Dimensions (width x length) | ft (m) | 13 x 246 (3.95 x 75) | | 13 x 164 (4 x 50) | |
| Roll Area | yd ² (m ²) | 355 (296) | | 237 (200) | |

¹True resistance to elongation when initially subjected to a load determined in accordance with ASTM D6637 without deforming test materials under load before measuring such resistance or employing "secant" or "offset" tangent methods of measurement to overstate tensile properties.

²Load transfer capability expressed as a percentage of ultimate tensile strength.

³Resistance to bending force determined in accordance with ASTM D7748, using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs (as a "ladder"), and of length sufficiently long to enable measurement of the overhang dimension. The overall Flexural Stiffness is calculated as the square root of the product of MD and CD Flexural Stiffness values.

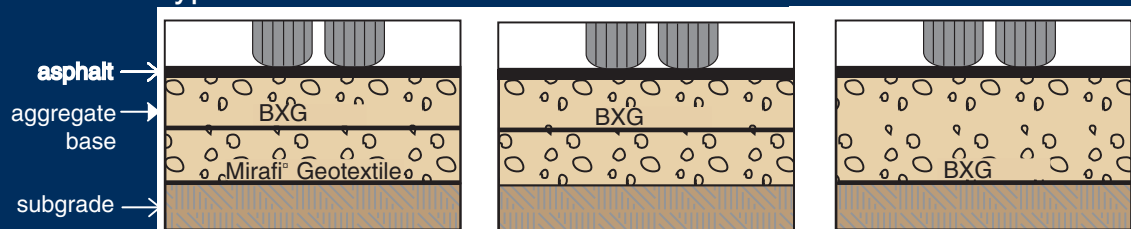
⁴Resistance to in-plane rotational movement measured by applying a 20 kg-cm (2 m-N) moment to the central junction of a 9 inch x 9 inch specimen restrained at its perimeter in accordance with GRI GG9.

⁵Resistance 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 D5818 and load capacity shall be determined in accordance with ASTM D6637.

⁶Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.

⁷Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355.

Typical Base Reinforcement Cross Sections



Conditions: CBR < 3
Base Course Thickness > 250mm(10")

Conditions: CBR > 3
Base Course Thickness > 250mm(10")

Conditions: CBR > 3
Base Course Thickness < 250mm(10")

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