

Miragrid® Geogrids for Soil Reinforcement

TenCate develops and produces materials that function to increase performance, reduce costs and deliver measurable results by working with our customers to provide advanced solutions.

The Difference Miragrid® Geogrids Make:

- High long-term design strengths (LTDS). Miragrid® geogrids have more than 100,000 hours of tension creep testing performed at an independent test laboratory. Credible, dependable long term strength assured.
- Cost effective. Creep resistant polyester fibers provide higher allowable tensile strength, minimizing the required number of geogrid layers. Wide rolls significantly reducing placement time, lowering cost.
- Light weight, easy to handle. No sharp edges.
- Flexible, tough. Minimizes movement of soil structure.
- Custom fabrication. Rolls fabricated to meet your specific project requirements.
- Miragrid® geogrids provide the widest strength range, and are the highest strength geogrid material in the market today.

APPLICATIONS

Miragrid® geogrids can be used in most MSE applications for soil reinforcement including internally reinforced soil walls, segmental retaining wall reinforcement, steep reinforced slopes, and reinforcement in a variety of landfill applications including potential voids bridging and veneer stability. When a project specifies for long-term design strength for structure stability use Miragrid® geogrids.

INSTALLATION GUIDELINES

Before placing Miragrid® geogrids, the surface should be cleared of all debris and the foundation base proofrolled. The grids should be rolled out, cut to length, thus eliminating field connections and laid at the proper elevation, location and orientation. Since geogrids vary in strength with roll direction, Miragrid® geogrids should be laid in the direction of main reinforcement.

After rolling out, the geogrid should be tensioned by hand until it is taut, free of wrinkles, and lying flat. Adjacent geogrid rolls may be butted together side-by-side without overlap. Splices in the main reinforcement direction should be avoided.



Certain fill placement procedures may require the reinforcement to be held in place by stakes, sandbags, or fills, as directed by an engineer. A razor blade, sharp knife or scissors may be used to cut the geogrid. Fill placement should follow the standard practice, or as defined in the project specifications or directed by the Engineer. Care should be taken to prevent wrinkles and/or slippage of reinforcement during fill placement and spreading.

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



Miragrid® Geogrids for Soil Reinforcement

Property	Test Method	Units	2XT ⁴	3XT	5XT	7XT	8XT	10XT	20XT	22XT	24XT
Polymer (coating)	—	—	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)	PET (PVC)
Tensile Strength @ Ultimate (MARV) ¹	ASTM D6637 (Method B)	lbs/ft (kN/m)	2000 (29.0)	3500 (51.1)	4700 (68.6)	5900 (86.1)	7400 (108.0)	9500 (138.6)	13705 (200.0)	20559 (300.0)	27415 (400.0)
Creep Reduced Strength ²	ASTM D5262/ D6992	lbs/ft (kN/m)	1379 (20.0)	2414 (35.2)	3241 (47.3)	4069 (59.4)	5103 (74.5)	6552 (95.6)	9452 (137.9)	14179 (206.9)	18907 (275.9)
Long Term Design Strength ³		lbs/ft (kN/m)	1142 (17.0)	1999 (29.2)	2684 (39.2)	3370 (49.2)	3927 (57.3)	5042 (73.6)	7540 (110.0)	11311 (165.0)	15083 (220.1)

Packaging	Units	2XT ⁵	3XT ⁵	5XT ⁵	7XT ⁵	8XT ⁵	10XT ⁵	20XT ⁵	22XT ⁵	24XT ⁵
Roll Width	ft (m)	4 6 12 (1.2)(1.8)(3.6)	6 12 (1.8)(3.6)	6 12 (1.8)(3.6)	6 12 (1.8)(3.6)	6 12 (1.8)(3.6)	12 (3.6)	12 (3.6)	12 (3.6)	12 (3.6)
Roll Length	ft (m)	50 150 1000 (15)(46)(305)	150 300 1000 (46)(91)(305)	150 300 1000 (46)(91)(305)	200 300 1000 (61)(91)(305)	200 300 1000 (61)(91)(305)	200 1000 (61)(305)	200 1000 (61)(305)	200 (61)	200 1000 (61)(305)
Estimate Roll Weight	lbs (kg)	25 50 109 (11)(23)(49)	115 115 670 (52)(52)(304)	135 135 831 (61)(61)(376)	130 179 846 (58)(81)(383)	140 205 975 (64)(93)(442)	255 1235 (116)(559)	360 1725 (163)(781)	470 (213)	595 2840 (270)(1287)
Area	yd ² (m ²)	22 100 109 (18)(84)(167)	200 200 1333 (167)(167)(1114)	200 200 1333 (167)(167)(1114)	200 267 1333 (168)(220)(1114)	200 267 1333 (168)(220)(1114)	267 1333 (220)(1114)	267 1333 (220)(1114)	267 (220)	267 1333 (220)(1114)

¹Minimum Average Roll Values (MARV) shown above are based on QC Testing per a defined lot not to exceed 12 months. Testing Frequency follows ASTM D4354, Table 1.

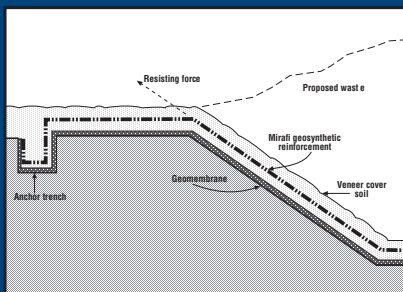
²75-year design life based on NTPEP Report REGEO-2011-01-001 and REGEO-2015-01-002.

³Long Term Design Strength for Type 3 Backfill (Silty Sand), 6-inch lift / 25,000-lb roller.

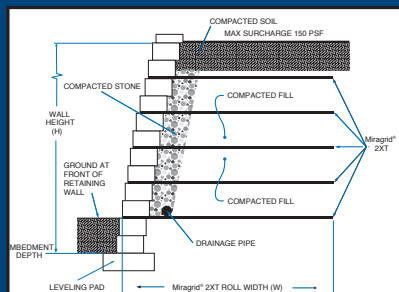
⁴Note: Values shown for Miragrid 2XT[®] are both machine and cross-machine direction. Values for other Mirafi[®] products are machine direction only.

⁵Available in various roll widths and roll lengths.

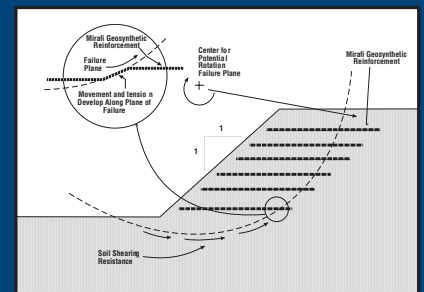
Miragrid® Geogrids Typical Applications



Veneer Reinforcement



Retaining Wall



Steepened Slope

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