



Miragrid® 2XT Reinforcement Geogrid Design Guidelines

- Contact TenCate Geosynthetics before using Miragrid® 2XT biaxial geogrid in wall heights greater than values shown in chart.
- Place Miragrid® 2XT biaxial geogrid between every two rows of 6" high or three rows of 4" high retaining wall block.
- Provide adequate drainage and compacted fill per retaining wall block manufacturer's instructions.
- Chart is for estimating purpose only. Final design should be performed by a registered, professional engineer to meet all local codes and regulations. No provisions have been made for global/external stability, nor site topography.
- Follow all retaining wall block manufacturer's instructions for installation.
- Other soil types and loading conditions should be evaluated before construction to determine wall height limitations and reinforcement spacing.
- Any loading/surcharge conditions other than those shown above should be evaluated before construction to determine wall height limitations.
- Where "none" is shown in the estimating chart, no Miragrid® 2XT biaxial geogrid reinforcement is required to construct the wall under the conditions shown.



Miragrid® is a registered trademark of Nicolon Corporation. Miragrid® 2XT uniaxial geogrid is subject to Nicolon Corporation's limited warranty. Limited warranty may be obtained at mirafi.com or by contacting your retailer or TenCate at (706) 693-2226.

Number of Miragrid® 2XT Layers

Backfill Soil Type	Wall Height ft (m)	Block Size (Height x Width)		
		4"x12"	6"x12"	6"x16"
Slit & Clay	2 (0.6)	none	none	none
	3 (0.91)	3	3	3
	4 (1.22)	4	4	4
	5 (1.52)	5	5	5
Sand	2 (0.6)	none	none	none
	3 (0.91)	3	3	none
	4 (1.22)	4	4	4
	5 (1.52)	5	5	5
Gravel	2 (0.6)	none	none	none
	3 (0.91)	3	3	none
	4 (1.22)	4	4	none
	5 (1.52)	5	5	5
	6 (1.83)	6	6	6

$$\frac{\# \text{ Layers} \times W \times \text{length of wall}}{180 \text{ square foot}} = \# \text{ of rolls}$$

Example: A SRW wall using 6" x 16" blocks in gravel backfill soil is 6 ft tall x 30 ft long. Derived from table: H = 6ft, W = 4ft, & 6 layers. 6 layers x 4 ft x 30 ft = 4 rolls 180 sq ft per roll

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Retaining Wall Reinforcement Geogrid



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MIRAGRID® 2XT RETAINING WALL REINFORCEMENT GEOGRID



What is Miragrid® 2XT reinforcement geogrid?

A geogrid is an open mesh grid structure that is placed in horizontal layers to reinforce retaining walls. The geogrid acts as a “tie-back” to resist the outward movement of the retained soil. The geogrid holds the soil in place to allow the retaining wall to function.

Why do I need Miragrid® 2XT geogrid?

The use of Miragrid® 2XT geogrid increases the wall height that can be constructed. The retained soil behind the retaining wall exerts tremendous pressure on the concrete blocks holding the soil in place. Miragrid® 2XT uniaxial geogrid is designed specifically to provide reinforcement to the soil reducing the outward pressure and allowing the wall height to be increased and to function properly.

How is Miragrid® 2XT sold?

Miragrid® 2XT geogrid is packaged in 4ft x 45ft rolls. Each roll contains detailed installations.

When do I need to use Miragrid® 2XT geogrid?

Miragrid® 2XT biaxial geogrid should be used when the wall height at any location in the wall exceeds manufacturer’s gravity wall (wall without geogrid) recommendations. When building taller walls, the retained soil begins to exert enough outward force in the wall to push over the concrete blocks causing wall failure. A properly designed wall with Miragrid® 2XT geogrid as the reinforcement, will reduce this outward pressure allowing the wall to function as desired.

Should I get a qualified professional to design my wall?

TenCate Geosynthetics Americas recommends that a qualified professional engineer review all retaining wall projects for compliance with local codes, design standards, and regulations before construction.

Can any open mesh grid be used for reinforcement?

No. Miragrid® 2XT geogrid is designed specifically to provide reinforcement for concrete block retaining

walls. It is produced with strong fibers that reinforce the entire soil structure. Other open mesh grids, such as safety fence or deer netting, are much weaker than Miragrid® 2XT geogrid and do not provide adequate reinforcement.

How much Miragrid® 2XT geogrid do I need for my wall?

The quantity of Miragrid® 2XT biaxial geogrid required depends on the wall height and length. An estimating chart is provided on the back of this flyer to help in determining the amount of geogrid required.

How tall can I build a wall with Miragrid® 2XT geogrid?

The height of the wall that can be constructed with Miragrid® 2XT geogrid depends on block type and size, soil type, and surcharge on top of the wall. An estimating chart is provided on the back of this flyer to help in determining the amount of geogrid

required. All concrete block units have a height limit that must not be exceeded. Check with the block manufacturer for more information on height limitations.

How is Miragrid® 2XT geogrid installed?

Miragrid® 2XT biaxial geogrid is placed in the soil every two rows of 6” high block or three rows of 4” high block. The geogrid is “sandwiched” between the concrete blocks and placed back into the soil. Installation instructions are available in each bag of Miragrid® 2XT geogrid. Make sure to follow all local building codes and the retaining wall block manufacturer’s instructions for installation.

Protective & Outdoor Fabrics
Aerospace Composites
Armour Composites
Geosynthetics
Industrial Fabrics
Synthetic Grass