



Installation Guide: Soil Stabilization

MANUFACTURING

BaseCore™ - Geocell

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BaseCore™ Overview: How It Works

The BaseCore™ GeoCell takes the concept of two dimensions, length and width, and expands it to a third; depth. This vertical and horizontal confinement of the entire depth of the base layer not only provides maximum stability, but has major implications on cost effectiveness and long-term performance of the project.

The system essentially acts as a large mat when its panels are expanded, resulting in a three-dimensional honeycomb structure that distributes weight over an extended area. Because of this resistance to lateral movement, a local and less costly base and infill material can be used.

BaseCore™ has the ability to achieve a higher structural number while using less material, cutting maintenance time and costs even more. The cells strengthen the infill material and result in a greater thickness level, compared to using a greater amount of material. The table below is comparing BaseCore™ filled with sandy soil, to the structural coefficients of other fill material.

Equivalent Layer Thickness						
Material	BaseCore™ Filled With Sandy Soil	Ashpaltic Concrete	Crushed Stone	Sandy Gravel	Lime-Stabilized Soil	Sandy Soil
Structural Coefficient	0.35	0.41-0.44	0.14	0.07-0.11	0.08-0.15	0.05-0.10
Thickness Equivalent	4" (100MM)	3.4" (86MM)	10" (254MM)	12.7" (323MM)	17.5" (445MM)	20" (508MM)
	6" (150MM)	5.1" (123MM)	15" (381MM)	19.1" (485MM)	26.3" (668MM)	30" (762M)
	8" (200MM)	6.8" (173MM)	20" (508MM)	25.5" (648MM)	35" (889MM)	40" (1016MM)

Accessories:

Adjacent sections of BaseCore™ must be joined to keep them from moving when the infill material is placed. Depending on various factors of the job, there are two avenues of connecting panels that can be taken.



BaseClips™

BaseClips™ are industrial grade plastic connectors designed specifically for use in geocell applications. These two-piece clips are easy to install and made to last for a lifetime.

BaseCaps™

- Accommodates 1/2"
- Very strong, thick plastic
- Drives easier than J hooks
- Weather/ Mildew resistant
- Corrosion resistant Black

Anchor your Geocell pavers or ground grids using this durable rebar cap. BaseCaps fit onto the end of 1/2" rebar rods. The arms slide over BaseCore™ geocell walls to securely hold them in place and are installed more easily than comparable J-hooks.



Installation: Step by Step

The following are installation recommendations of the BaseCore™ geocell. a base installation.

01

Prepare Subgrade

Per the project engineer's specification, the sub-grade is prepared based on depth, grade, and compaction.

**02**

Lay Geotextile

The geotextile is used as a separator to impede BaseCore™ material from migrating into the sub-grade. If required, place non-woven geotextile directly over the prepared sub-grade. If geomembrane liner is part of the installation, place it directly over the geotextile. Once the liner is welded, a secondary layer of geotextile is installed.

A biaxial grid may also be installed, per the manufacturer's recommendation.

Installation: Step by Step

03

Panel Expansion

Expand the panels to the full length of expansion based off of the cell aperture.



04

Panel Connection

Join the panels. Each cell along the width and the length must be attached at the joints.

When first pulled open, the cells will have the tendency to open in an hourglass shape. When proper length is reached, pull the panel edges to insure rectangular expansion. Then, stake the panels at each cell along the width at either end, and along the cell every other cell. Straight re-bar or wooden stakes can be used.

Installation: Step by Step



05

Fill Panels

Fill the cells with choice of infill material. An excavator can be used to push the fill material on to empty cells. When dumping fill material, keep the bucket as close to the empty cells as possible and limit drop height to no more than 2 feet above the cells. Once filled, the stakes can be removed.



06

Overfill & Compact

Typical overfill of the cells is 2-3 inches. After that has been accomplished, a vibratory roller is used to get the desired compaction. Typical compaction is done with a 9-ton roller.

Legal Notice

Provides this information only as an accommodation to our customers. No warranty or other representation regarding the suitability of the application procedures is made to the fact that each installation has specific requirements that may not have been considered in this generalized procedure overview. BaseCore™ makes no warranties or representations regarding the suitability of its BaseCore™ for specific uses or applications. User is strongly urged to consult its engineer and/or architect prior to purchase and installation of materials set out herein.