





7 KEY FACTORS

to choosing the right geocell



Not All Geocells are Created Equal

Quality. Experience. Support. They all matter.

We all want the highest quality products (but are we willing to pay for them)? We all want services included (but are we willing to pay for them)? What happens if we settle for less than the highest quality materials and don't receive support for a product we know little about? Could we be putting our project at risk of failure?

Quality

Following are the 7 most important Key Factors to choosing the right geocell.

Components

Accredited Certification

Experience

Design Support

Certainty

Installation Support

7 KEY FACTORS to choosing the right geocell



1. QUALITY

The Geocell Material Is Suitable for the Project

Quality correlates to seam strength. Your geocell project is only as strong as your weakest seam weld.

Presto co-invented the geocell technology and its GEOWEB® brand is recognized in the geosynthetics industry as the <u>original high-quality</u>, <u>high-performance geocell</u>.

For over thirty years, GEOWEB® material has been manufactured from only the <u>highest quality</u> blend of High Density Polyethylene (HDPE).

- Presto prefers quality and publishes standard "minimum seam strengths" when others use "averages".
- Presto follows stringent ISO and CE quality standards in the manufacture of GEOWEB® sections to ensure consistency between each section shipped to the jobsite.
- Presto's ISO and CE certifications are verifiable and certifiable.



CAUTION:



do not have the same material properties or design strength as the GEOWEB® material and can lead to a project failure.

Some manufacturers utilize low quality,

inconsistent material,

or even use geotextile

fabric for their brand of "geocells". These

lower quality geocells

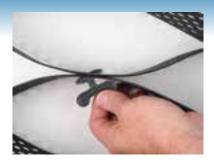




2. INTEGRAL COMPONENTS The Complete Solution Includes Proper Components

Integral components have a critical role in contributing to the overall design strength of the engineered solution. Presto's GEOWEB® accessories provide higher design strength than alternative methods. They are also designed to save contractors time and money during installation, and minimize the potential for incorrect installations.

ATRA® KEYS

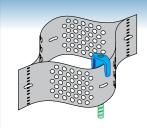


GEOWEB® Connection Device.

ATRA® keys, made from weather-resistant polyethylene, are 3 times stronger and 3 times faster than stapling. Easy installation: ATRA® keys are inserted through adjoining GEOWEB® cell walls, turned and locked for the most secure connection.

CAUTION: Staples are subject to corrosion, ATRA® keys are not! Operating a pneumatic stapler is cumbersome. When contractors do not place the correct number of staples per geocell connection, stress on those stapled seams over time can create potential for failure. See 1 & 3 below.

ATRA® ANCHORS



Internal & Crest Anchors

Presto's ATRA® anchors make a secure connection with the GEOWEB® cell wall and are faster and easier to drive than J-hooks.

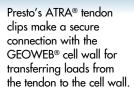


J-hooks make a poor connection with the cell wall, protrude over the top of the cell wall, and are corrosive.

See 2 below.

TENDONS & ATRA® TENDON CLIPS

Load Transfer Device



Support System

Tendons suspend the GEOWEB® material over geomembranes, or hard surfaces without anchors. Presto uses industry-leading tendons, as tendon type and density are critical to the design strength.





CAUTION: Other load transfer devices can become disengaged with the tendon and/or geocell cell wall, creating additional stresses that can lead to system failure.

A CAUTION:

Simply piecing together substitute geocells, tendons, connection devices, load transfer devices and anchors with unknown strengths and performance will not give the same design result!







3. EXPERIENCE

The Geocell Manufacturer has Extensive **Application Experience**

There is simply no manufacturer that has as much application experience as Presto.

- Presto has supported the design and construction of thousands of projects across a diverse world environment for 35 years.
- Presto and their representative network commit thousands of hours of free evaluation time each year to support engineers' designs.



A CAUTION:

Some geocell manufacturers do not have a fundamental understanding of the technology or its limitations for the project application. Using their material can lead to failures.







4. CERTIFICATION

The Geocell Material Meets Accredited Industry Standards

Third party certification delivers confirmed and validated data that cannot be disputed.

- For over three decades, Presto has thoroughly researched and tested their GEOWEB® material performance at leading industry, accredited research/testing laboratories. The results are certifiable and are integrated into our project evaluation recommendations.
- We test at only the best! TU Clausthal Germany, Royal Military College of Canada, Sageos, Groupe CTT Group Canada, TTCI AAR, Colorado State University (CSU), University of Kansas



Be careful of geocell manufacturers who do not have results from accredited research/ testing laboratories to back their material or performance claims.



5. DESIGN SUPPORT

The Engineer Receives Proper Tools & Engineering Guidance

Geocells solve many of the world's most challenging soil stability problems, so extra caution should go into their designs.

Presto is committed to the engineer, and offers the most complete design support and resources in the industry:

- Complimentary project evaluation is a collaborative effort to ensure projects are designed to performance expectations.
- Full specification package includes CSI-format and material specifications, detailed CAD drawings and a quick specification building tool, SPECMaker®.



 Presto offers its GEOWEB® MSE wall program (free licensed software) for engineers to design gravity and geosynthetic-reinforced walls.



CAUTION:

Presto's evaluations are based solely on the material properties and tested performance of the GEOWEB® material. Simply substituting alternative geocells for the same design can cause a failure.

6. INSTALLATION SUPPORT

The Contractor Receives Proper Installation **Tools & Training**

When contractors are properly trained, it saves them time and money, and minimizes the potential for mistakes, improper installation and risk of system failure.

- Presto is committed to the contractor and provides detailed installation instructions, step-by-step drawings and videos.
- Pre-construction training and on-site field support is available from Presto or their qualified representatives.



A CAUTION:

Presto is the only geocell manufacturer that provides a complete offering of tools, training and field support to contractors. Improper installation can lead to a failure.





7. CERTAINTY

Your Owner & Your Reputation are Protected

The most important reason to choose the right geocell is to protect your owner as well as your reputation!

You have worked hard on your design — from evaluating materials and comparing alternative methods and costs to ultimately choosing the GEOWEB® solution for your project.

At the end of the day, it's your design and your project. Stand behind your GEOWEB® design and do not allow substitutions to risk the success of your project, or your reputation.



L CAUTION:

DOES YOUR GEOCELL HAVE THESE 7 KEY FACTORS?

They could be the difference between project success or project failure.



GEOWEB® project. Presto performs project evaluations, analyzes relevant project data such as slope angle and length, flow (velocity, depth), vehicle loading, and infill (type, weight), and recommends a solution to the engineer. Presto's distributors and representatives offer installation training and site supervision to the contractor. Project Success.



Substitute geocell project. Substitute geocells are often manufactured from inferior quality material that exhibits lower strength characteristics (i.e. seam strength). No project evaluation, no design collaboration and no contractor training or supervision can result in an improperly connected system in an improper application and with improper infill. Project Failure.

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670 N Perkins Street • Appleton, Wisconsin 800-548-3424 or 920-738-1328 • Fax: 920-738-1222 Email: info@prestogeo.com • www.prestogeo.com

DISTRIBUTED BY:

Greenfix Soil Stabilisation & Erosion Control Limited Old Manor Farm Yard Beckford Road Ashton under Hill Evesham Worcestershire WR11 7SU

tel 01608 666027

Email sales@greenfix.co.uk www.greenfix.co.uk

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