



Decoland Geocell

Erosion Control System



Scan for more info



INTRODUCTION

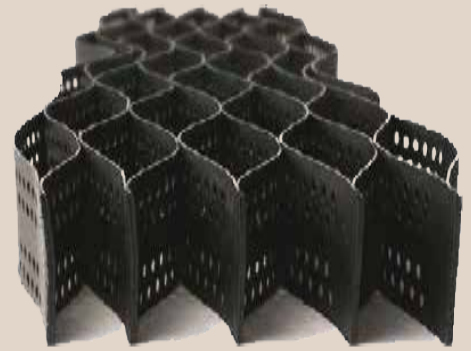
What is Geocell?

Geocell (Cellular Confinement System) is a high quality erosion control and soil stabilization material with a three-dimensional honeycomb structure. The system provides fast, economical and long lasting solutions for soil stabilization applications and hydraulic structures, while preventing earth loss due to water and wind in general purpose sloping surfaces.

Geocell, produced by first quality polymer strips with special additives with innovative ultrasonic welding technology, provides excellent protection and reinforcement on the applied surface.

While the perforated structure of the material allows fast drainage of water, the textured surface of the cells allows the filling material to be reliably held even at high slopes, cells can be filled with different materials (sand, gravel, soil, concrete) according to the purpose of use.

Cell heights vary between 50-300 mm depending on project requirements.



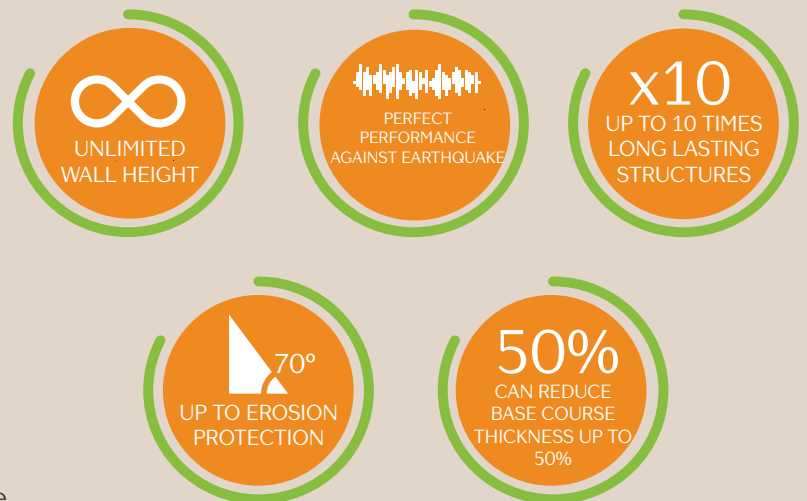
Features and benefits of Geocell

- ◆ **High quality materials** to serve safely even in the most difficult natural conditions,
- ◆ **Increased strip thickness** giving a superior strength against tensile loads,
- ◆ **Excellent welding strength** using a special ultrasonic welding system with superior strength that does not break even under extreme loads,
- ◆ **Textured cell wall**, frictional surface increases the adhesion of the cell wall and the fill material preventing the loss of material,
- ◆ **Perforated cell wall** permitting rapid drainage of water between cells and propagation of the plant root system.

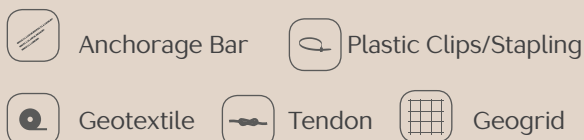
Infill Materials



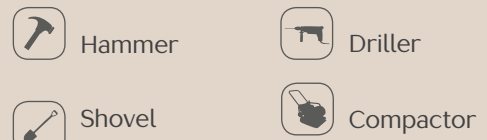
Advantages



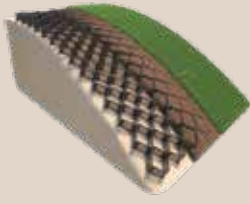
Supplies



Hand Tools



APPLICATIONS



EROSION CONTROL

- » Shoreline revetments
- » Landscape applications
- » Landfill linings and covers
- » Cut or fill embankment slopes
- » Containment dikes and levees
- » Dams and spillways
- » Abutment protection
- » Vegetated channel structures
- » Highway and railway ride slopes



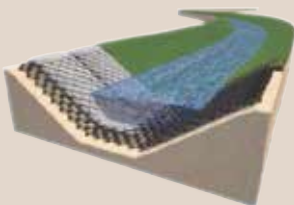
SOIL STABILIZATION

- » Roadway shoulders
- » Stabilized drainage layer
- » Permeable load-support
- » Stabilized base for asphalt pavements
- » Permanent and temporary access roads
- » Parking areas
- » Trails and walkways
- » Track ballast and sub-ballast structures
- » Foundation mattresses and pipeline protection



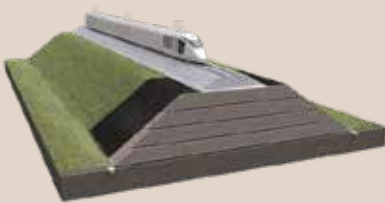
RETAINING WALLS

- » Green MSE walls (Mechanically stabilized earth)
- » Culvert headwalls
- » Shoreline revetments
- » Steepened embankments
- » Sound barriers
- » Road widening
- » Dike and levee protection
- » Dams and flood defence bunds



HYDRAULIC STRUCTURES

- » Down chutes
- » Flow channels
- » Culvert outfalls
- » Shore protection
- » Dam faces and spillways
- » Storm water diversion or containment
- » Drop structures
- » Process water channels
- » Geomembrane protection
- » Swales and drainage ditches
- » Storm water/waste water lagoons



RAILWAYS

- » Maintenance reduction,
- » Cost saving,
- » Eliminating the need for high quality construction materials,
- » Improving the structure for long-term applications.



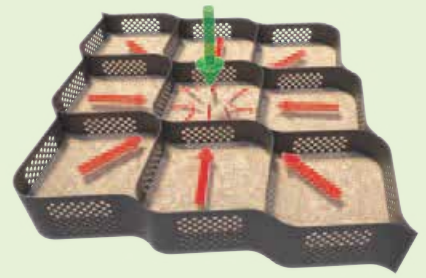
AIRPORTS

- » Suitable reinforcement alternative to the conventional method,
- » Improving the overall structural strength,
- » Reducing operational costs,
- » Minimizing maintenance requirements,
- » Using on-site or recycled materials.
- » Improving the bearing capacity of soft soils.
- » Increasing the strength of shoulders to safely support even heavy aircraft loads if required in an emergency situation.

TECHNICAL

Geocell forms a three dimensional load support system that significantly increases the load bearing capacity of the underlying sub-grade soil.

Each cell confines the soil, preventing lateral spreading and increasing base stiffness. Both soil interaction with the cell walls and passive resistance developed between adjoining cells increases vertical shear resistance of the infill material. When filled with granular infill, Geocell can reduce base course thickness by as much as 50%.



Technical Specifications*

GENERAL

Material	:	High Density Polyethylene (HDPE)
Color	:	Black / Green
Manufacturing location	:	Egypt
Stripe Surface Treatment	:	Textured surface - Perforated / Non perforated
Welding Type	:	Ultrasonic
UV and frost	:	UV resistant

PHYSICAL DATA

Height / Cell depth (H) mm (+/-10%)	:	75 - 100 - 150 - 200
Welding Distance (W)/mm (+/-10%)	:	360 - 460 - 660
Nominal expanded cell size /mm (+/-10%)	:	210*250 / 280*340 / 420*490
Number of cells / m ²	:	5 -15
Strip thickness / mm (+/-10%)	:	1.2 - 1.5
Material density kg/m ² (+/-10%)	:	0.95
Tensile strength / KN/m ² (+/-10%)	:	12
Seam peel strength / N (+/-10%)	:	1000

* In favor of product improvements, producer may change specifications without prior notice.

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