Verdant Solutions
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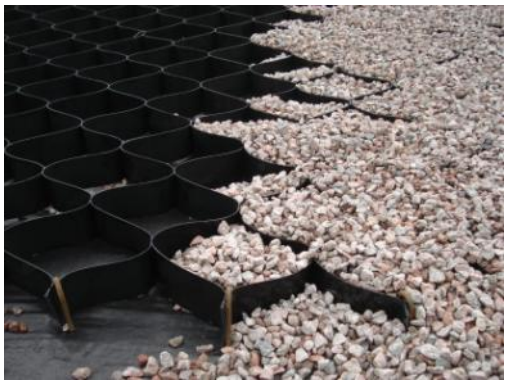
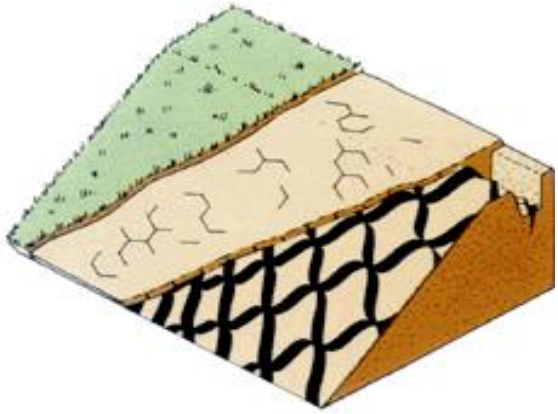
Verdacell Soil Confinement/ Reinforcement Systems Specification Sheet

VERDACELL is a cellular matrix of interconnecting polymer strips that form pockets to locate and strengthen the fill material. The polymer strips confine the filling material and provide a tensile strength, very effectively increasing the shear resistance.



Verdacell Soil Erosion Control

Basal Reinforcement ● Slope Stability ● Liner Protection



Some Typical Applications

- Protection and vegetation for steep slopes and spoil tips
- Reinforced grass surfaces for access roads, car parks, fire access etc
- Basal support for block paving under heavy loading
- Sand dune stabilisation
- Liner protection to lakes and ornamental ponds

Specifications	**VERDACELL 100/300 Perforated**	**VERDACELL 100/240 Perforated**	**VERDACELL 150/300 Perforated**	**VERDACELL 200/300 Solid or Perforated**
Colour	Black	Black	Black	Black
Material	High Density Polyethylene	High Density Polyethylene	High Density Polyethylene	High Density Polyethylene
Cell Height (mm)	100	100	150	200
Cell Diameter (mm)	300	240	300	300
Material Thickness (mm) +/-5%	1.2	1.2	1.2	1.2
Panel Size, m, fully expanded	6m x 4m	3.9m x 5m	6m x 4m	6m x 4m
Weld Space	500mm	420mm	500mm	500mm
Junction Tensile Strength Minimum	1200 N	1200 N	1800 N	2400 N
Material Tensile Strength Panel weight (stock item)	22 kN/m 24kg	22 kN/m 21kg	22 kN/m 34kg	22 kN/m 48kg
'J' Fixing Pins (dependant on ground conditions)	10/12mm x 300mm	10/12mm x 300mm	10/12mm x 400mm	10/12mm x 600mm

Specialists in Geosynthetics & Erosion Control

High Street, Hartfield, East Sussex TN7 4AE
Tel: 01892 770470 Fax: 01892 770760

Email: office@verdantsolutions.ltd.uk
www.verdantsolutions.ltd.uk

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Verdacell Soil Confinement/ Reinforcement Systems Installation Guide

Installation Guide

Verdacell consists of HDPE strips securely welded together to form a honeycomb web of open cells. Verdacell is supplied as rectangular panels compressed into a relatively small strip which is expanded on site. On steep slopes the Verdacell holds the veneer surface in place and helps prevent erosion by rain, water and wind when the cells are backfilled with soil or aggregate.

Verdacell is supplied in four panel sizes, as detailed on page one of this leaflet.

A 'V' trench is assumed, if ground conditions allow, at the top of the embankment. The appropriate anchor trench size will depend on the specific ground conditions of the site.

The Verdacell may be laid in either direction. Stretch the Verdacell down the face of the slope and pin in position according to the specified pinning pattern. One fixing pin to each cell in top trench. One fixing pin to every other cell at bottom. Should the slope be more than 2.5 m long intermediate fixing ties or pins may be required.

Fixing pins are normally 10/12mm rebar 'J' pins, length depending on ground conditions and cell depth. If installing on to a slope then you would require approx. 40 No. pins /panel. On a flat surface it would be approx. 20 No. pins /panel or if filling with shingle, approx. 10 No. pins /panel.

When correctly extended, each panel should be approximately rectangular and the cells within each panel will appear symmetrically shaped.

If the Verdacell panels have to be joined part way down the length of the slope use one cable tie or 'J' pin rebar per cell. Straight pins can be supplied with plastic retaining clips which would be placed at the top of the panel, fitted over the rebar pin and cell wall. Or, when using the solid Verdacell panels, a small hole can be drilled through the side of the two cell's and a cable tie fitted through both. Preferably the Verdacell is supplied in panel lengths that avoid or minimise the number of joints within the length of the slope. Lay the adjacent panels in a similar manner.

Fill material should be placed from the top of the slope, evenly towards the bottom. Ensure that each cell is filled completely and covered so that the walls of the Verdacell remain perpendicular to the slope.

The infill material should be placed slightly above the depth of the Verdacell and where appropriate, compacted lightly.

When the Verdacell is filled with screened topsoil and then seeded, it may be covered with a light weight biodegradable matting to avoid seed wash out during heavy rainfall.

High Street, Hartfield, East Sussex TN7 4AE
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Installation guide when using Verdatex Looped Geotextile for liner protection

Verdacell is supplied as standard made panels, 6m x 4m when extended, 100, 150 or 200mm deep, with a 300mm cell size.

The Verdacell can be installed onto a geomembrane and fixed to a Verdatex looped geotextile, which directly overlies the geomembrane.

An anchor trench is constructed at the top of the embankment, the dimensions of the trench being dependent on the site specific ground conditions.

The Verdacell is stretched down the face of the slope and pinned in position, in the anchor trench, using one fixing pin to each cell, passing through looped geotextile and the geomembrane. The Verdacell may be laid in either direction.

Fixing pins are normally 10/12 mm rebar, 400mm or 600mm long depending on ground conditions and cell depth.

When correctly extended, each panel should be approximately rectangular and the cells within each panel will appear symmetrically shaped.

The Verdacell is then attached to the loops on the geotextile and around one side of a cell. The amount of cable ties attached to the loops and the Verdacell is dependent on the slope length. As a guidance on a standard 6m x 4m panel, allow 80/100 cable ties per panel.

If the Verdacell panels have to be joined part way down the length of the slope use one cable tie every other cell. Lay the adjacent panels in a similar manner.

The fill material should be placed from the top of the slope, evenly towards the bottom. Ensure that each cell is filled completely and the top edge of the cell is covered so that the walls of the Verdacell remain perpendicular to the slope.

The infill material should be placed slightly above the depth of the Verdacell (to allow for any future settlement) and where appropriate, compacted lightly.

The Verdacell above the waterline can be seeded and may be covered with a light weight biodegradable matting to avoid seed wash out during heavy rainfall or filled with aggregate not more than 40mm in size.

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