

Hy-Tex **Hycell** Cellular Confinement and Reinforcement Geo-cells



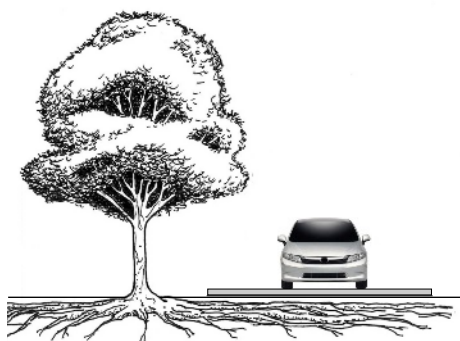
Hycell is a cellular matrix of interconnecting polymer strips that form pockets to locate and strengthen the fill material. The polymer strips confine the filling material and significantly improve tensile strength to very effectively increase the shear resistance and cohesion of the fill.

Hycell 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
 No dig drive tree root protection
 Basal support for block paving under heavy loading
 Sand dune stabilisation
 Liner protection to lakes and ornamental ponds

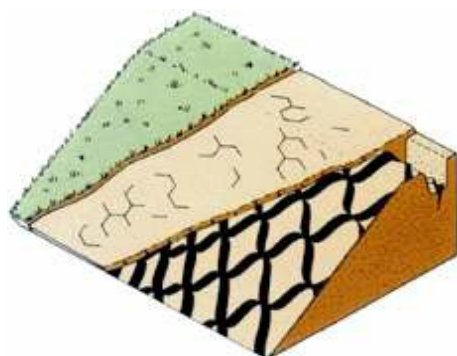


NO DIG ROADS OVER TREES

Tree Root Protection Hycell provides a flexible and permeable solution for protecting tree roots, creating a robust and stable platform for constructing vehicular access paths within the root protection area of existing trees without damaging the roots.

The cellular structure and perforated cell walls of Hycell, reduces the vertical load pressure on sub soils to tree roots and prevents damage. With clean granular materials as infill air and moisture can reach the roots to encourage healthy prolonged growth.

With no-dig solutions being the preferred option, Hycell, combined with a base layer of Terralys LF16/16 separator geotextile, is ideal as only the surface vegetation need be removed. As well as avoiding disruption to the roots this reduces construction times and costs as well as controlling surface rutting to increase the long-term performance and aesthetics of the final surface.

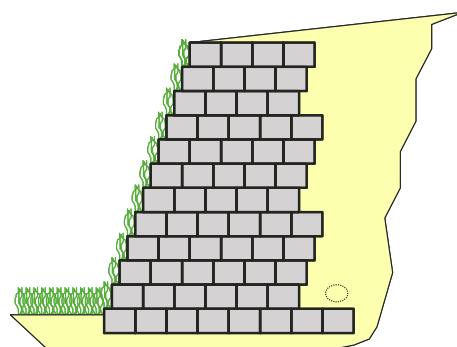


SLOPE STABILISATION

Hycell is supplied in flat perforated panels which, when expanded on site, provide 24m² of ground cover.

Using this inexpensive system it is possible to reduce foundation stone thickness by up to 50%. Laid over steep slopes the polymer strips provide a tensile force effectively increasing the cohesion of the material and acting as mini-weirs to reduce run-off and soil loss.

Fixing pins are required at a rate of 20 to 45 per panel depending on conditions.



VEGETATED RETAINING WALLS

Technical Specifications	Hycell 100	Hycell 150	Hycell 200
Colour	Black		
Material ¹	High Density Polyethylene		
Material Thickness	1.20mm		
Panel Size (fully expanded)	6.00 x 4.00m		
Cell Diameter	300mm		
Cell Height	100mm	150mm	200mm
Junction Tensile Strength ²	1,200N	1,800N	2,400N
Material Tensile Strength	22kN/m	22kN/m	22 kN/m
Panel Weight	24kg	36kg	48kg

Life expectancy (Including Joints) 120 years.

1 Tested in accordance with BSEN 964-1

2 Tested in accordance with BSEN ISO 10319

Panel size, height and cell diameter can also be made in sizes to suit customer's requirements

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Installation Guide

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

Stretch the Hycell 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.

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

If the Hycell 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 Hycell panels, a small hole can be drilled through the side of the two cells and a cable tie fitted through both. Preferably the Hycell 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 Hycell remain perpendicular to the slope.

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

When the Hycell 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.



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