



MiraCell™ CCS Sdn Bhd (671054M)

manufactured under US patent no. 4,797,026

Your solution to soil erosion and stabilisation

Cellular Confinement System

For advanced and cost effective soil stabilisation

EARTH RETENTION



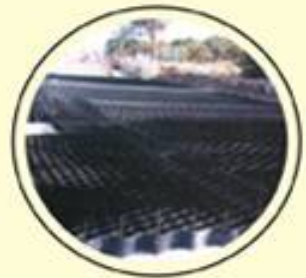
SLOPE PROTECTION



CHANNEL PROTECTION



LOAD SUPPORT

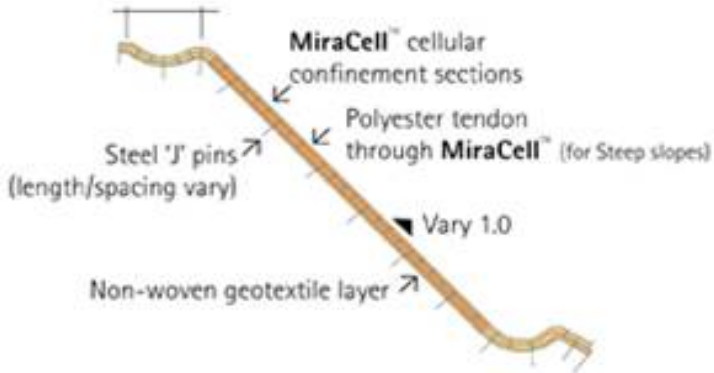


MiraCell™

EASY INSTALLATION AND MORE RELIABLE
MINIMUM MAINTENANCE
LOW HANDLING COSTS
NO WASTAGE

www.miracell-ccs.com

Berm drain with **MiraCell™**
infilled with concrete

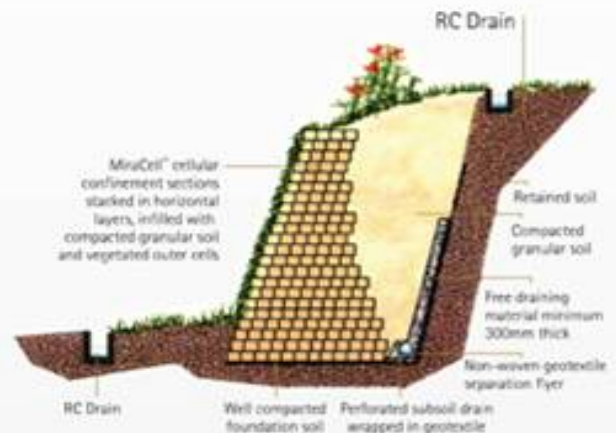


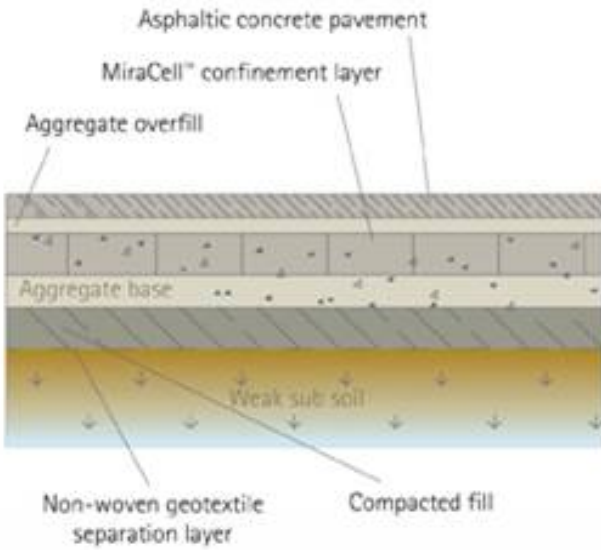
Slope Protection

MiraCell™ provides excellent protection for slopes against erosion through its engineered, expandable, strong, high density polyethylene, honeycomb structure. It confines desired infill and resist from downward migration of material due to hydraulic flows.

Earth Retention

MiraCell™ earth retention system is extremely durable and resistant to chemicals and water. It offers more flexible cost competitive retaining system than conventional earth retention systems.



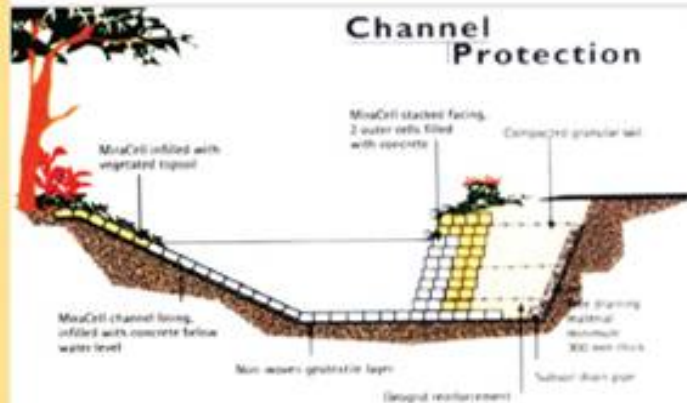


Load Support

MiraCell™ stabilises base material and minimise surface rutting in poor subgrade conditions. The load support system provides semi rigid surface for roads and yards by reducing fill thickness considerably.

Channel Protection

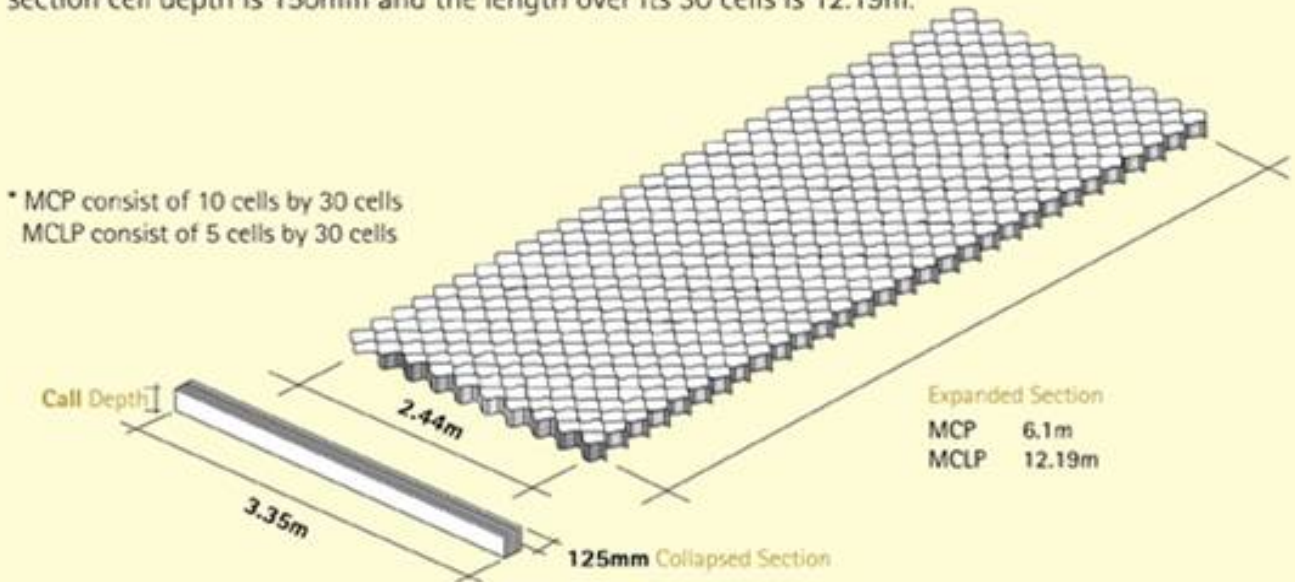
MiraCell™ effectively improves the hydraulic performance of conventional protection material such as concrete, gravel, vegetation and rip-rap by confinement within the cellular structure. Channel embankments can be protected from severe erosive conditions and continuous flow conditions by using MiraCell™ channel protection system.



Section Properties

MiraCell™ Section

MiraCell™ section dimensions shall be as indicated MCP/MCLP-D-XX. Sections shall have a nomenclature of "MCP/MCLP-D-XX" where "MCP" indicates a MiraCell™ standard cell, and "MCLP" indicates MiraCell™ Large cell. ; "D" indicates the cell depth in mm and; "XX" indicates the expanded length in number of cells. An example of MiraCell™ section nomenclature is MCP-150-30 where the section cell depth is 150mm and the length over its 30 cells is 6.1m, and MCLP-150-30 where the section cell depth is 150mm and the length over its 30 cells is 12.19m.



Dimension And Weight (Standard Cell)

Section	Expanded (m)	Width (m)	Area (m ²)	Weight (kg)
MCP-075-30	6.1	2.44	14.86	18.5
MCP-100-30	6.1	2.44	14.86	24.7
MCP-150-30	6.1	2.44	14.86	37.0
MCP-200-30	6.1	2.44	14.86	49.3

Dimension And Weight (Large Cell)

Section	Expanded (m)	Width (m)	Area (m ²)	Weight (kg)
MCLP-075-30	12.19	2.44	29.74	18.5
MCLP-100-30	12.19	2.44	29.74	24.7
MCLP-150-30	12.19	2.44	29.74	37.0
MCLP-200-30	12.19	2.44	29.74	49.3



MiraCell™ Perforated Cell

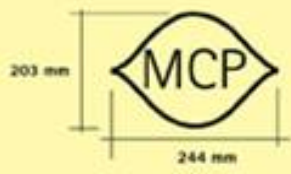

The Benefit of Perforated Cell

MiraCell™ perforated cellular confinement system has an engineered pattern of perforation in the cell wall. This hole pattern act as soil erosion resistant material by

- 1) Provide optimum root lock up for vegetation, creating more stable vegetated mass and healthier soil environment.
- 2) Act as natural drainage patterns in soil.
- 3) To increase frictional interlock with concrete and stone.

The perforated MiraCell™ system enhances system performance in Slope and Channel Protection, Earth Retention and Load Support applications.

MiraCell™ Specifications

Name	MiraCell™ Standard Perforated Cell (MCP)	MiraCell™ Large Perforated Cell (MCLP)
Section Size		
Length & Width	244 mm x 203 mm	488 mm x 406 mm
Area	14.86 m ²	29.74 m ²
Depths	75 mm, 100 mm, 150 mm, 200 mm	

MiraCell™ sections are manufactured from High Density Polyethylene (HDPE) strips of the following standards:

- Density 0.935-0.965 g/cm³
- Environmental Stress Crack Resistance >1500 hrs.
- Contain Carbon Black 1.5%-2.0% for Ultra Violet Light Stabilization
- Sheet thickness 1.25mm
- Ultrasonic welding for maximum seam strength



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