



## GREENCELL

A geocell made of white woven polypropylene tape

Greencell is made up of alternately joined geotextile strips to form a continuous square cellular mat section which is filled with earth, gravel or concrete & used to stabilize embankments, river banks, sand dunes, base courses & canals.



### TECHNICAL DATA SHEET

PROPERTY		UNIT	GC190	METHOD
<b>Composition</b>		Polymer	Coated Polypropylene	
<b>Mass</b>	Coated	gr/m <sup>2</sup>	190	SANS 10221-2007
<b>Thickness</b>	Under 2 kPA	mm	0.7	SANS 10221-2007
<b>Tensile Strength Ultimate</b>	Warp	kN/m	31	SANS 10221-2007
	Weft		26	SANS 10221-2007
<b>Elongation Ultimate</b>	Warp	%	13	SANS 10221-2007
	Weft		11	SANS 10221-2007
<b>Seam Strength</b>	Average	kN/m	7	EN ISO 10319
<b>Elongation</b>	Average	%	6	EN ISO 10319
<b>Cell Size</b>	Sides	mm	212 x 212	STANDARD
	Height		75 / 100 / 150 / 250	STANDARD
<b>Panel Size</b>	Width x Length	m	3 x 10	STANDARD

The listed technical values are guiding values, achieved in the manufacturer's laboratories and/or independent testing institutes. The products are subject to changes without prior notice.

Greencell are a cost effective cellular containment system manufactured from UV stabilised, coated slit film woven geotextile strips alternately stitched to form a continuous honey-comb square mat. This is then filled with a variety of natural material or concrete and used to stabilise embankments, river profiles, sand dunes, base courses & drainage canals. Greencells are available in a range of heights to suit most applications.



The information contained in this document is provided in good faith and as a general guide to the use of such products, and is, to the best of our knowledge, true and accurate. There is no implied or expressed warranty, and Geotextiles East Africa Ltd does not accept any liability for any information supplied, as the conditions of use and installation of the material are out of our control.



## GREENCELL

### A cost effective cellular containment system

#### SPECIFICATION

1. Manufactured from woven high tenacity polypropylene tape, coated with polyethylene, with a tensile strength of 25kN/m at an average of 12% elongation at break. Greencell is not affected by the alkaline in concrete and is UV stabilized.
2. The joints in the fabric are stitched with a multi-filament polypropylene thread.
3. The walls are impermeable with one side textured and the other side smooth, thereby improving the friction and sheet strength of concrete. As it is allowed to deform in the vertical plane it does not allow the blocks to punch through.
4. The polypropylene supplies a reinforcing to the concrete with its high tensile strength

#### INSTALLATION PROCEDURE

1. Clear and grun site.
2. Using suitable equipment, smooth and grade the site. Copmact to a maximum density
3. Lay **Greencell** over the prepared area ensuring that the tops of the cells are level with the surrounding terrain and that the highest section of the panel is secured in a lock trench at the top of the embankment or slope. **A specialist design service should be used for slopes that are steeper than 1:1.** Contact us for a design if this is the case.
4. Anchor the **Greencell** sections to the prepared surface with inverted shepherd's crook shaped steel stakes made from 10mm to 12mm reinforcing rod or similar. Every alternate cell should be staked along the edge of each section to ensure the system is well secured. **The stakes must be made long enough to penetrate the prepared surface to a depth which ensures that the system is well anchored to the slope.**
5. Align and join the alternate cells of each section of **Greencell** using wire ties or staples to create a continuous cover over the site. Tension the cover from the highest to the lowest point of the slope by staking the bottom edge of the cover to ensure that the individual cells are fully open to receive the fill.
6. Fill the cells of the entire **Greencell** cover with the selected material to give the required finish to the installation eg. top soil to promote vegetation growth, a 19 -53mm stone aggregate to promote drainage or concrete which provides a smooth water resistant finish. Fill comprised of soil, crushed stone or rock should be compacted to the maximum achievable compation.
7. In the case of concrete being used as fill, the surface should be raked flush to the top of the cells. Note that other types of fill material, if filled above the top of the cells, have a greater potential to be eroded and washed away.
8. Short term stability of the covered area is achieved by planting a fast growing form vegetation. Long term stability of the covered area requires planting of a deep rooted form of vegetation.



BEFORE



AFTER

#### ADVANTAGES

- Ease of installation
- Lightweight & quick to install
- Long lasting & tear resistant