Techno Earth

HDPE Geocell



Product Introduction

The geocell is a three-dimensional, honeycomb structure manufactured from 100% virgin material and jointly welded by ultrasonic technique. It is flexible to fold during the transport and installation on the construction site. The geocell nets will be filled with soils, granular, cement, or other on-site infill materials when stretched into web structures, which have powerful and rigid confinement on the lateral and vertical sides..

Application

- 1. Road support: solve problems on damaged roads, parking lot, and yard.
- 2. Slope protection: create a stable environment for the long-term sustainability of embankment material.
- 3. Channel protection: ensure stability and protection of channels exposed to all types of erosive conditions.
- 4. Vegetated retaining walls include steep slopes, retaining walls, gravity walls, and so on.





Technical Parameter

Product Type	Height (mm)	Welding Distance (mm)	Thickness (mm)	Tensile Strength of Welding Points (N/cm)	Tensile Strength of Commection of Cells (N/cm)	Tensile Strength of Yield of Each Sheet (Mpa)
Textured and Perforated	50	330	1.0~1.5	≥100	≥120	≥20
Textured and Perforated	100	330	1.0~1.5	≥100	≥120	≥20
Textured and Perforated	200	330	1.0~1.5	≥100	≥120	≥20

Remarks:

This is a basic technical specification.

All the above technical parameters can be reached according to the customer's requirement and other special standards can be carried out by agreement or contract.

Installation

How to Install Geocell

(a) Planning of Installation

It is advised that adequate planning and design of the installation be undertaken before the commencement of site work. When planning the installation, attention should be given to ensuring that all equipment and tools required for installation are available. In addition, sufficient personnel (with the necessary skills) should be employed on the installation work.

(b) Site Preparation

Geocells perform better when installed on even, well-prepared surfaces. Before installing geocell, it is advised that the slope surface is made level and even. Any sharp objects and stones that are much larger than (or significantly different in shape and angularity from) the intended fill material (i.e material to be placed in the cells) should be removed. If necessary, to achieve a level surface, compaction of the slope surface should be undertaken. If required, a suitable geotextile may be used as a separator between the geocell and the slope surface. (c) Expanding the Cells, Fixing, and Anchoring geocell is supplied flat in panel form. On-site it must be expanded and tailored to the desired dimensions and shapes. geocell is flexible enough to go around trees or other structures on the installation surface and some variations in cell shapes and sizes may be necessary when installing the product around obstacles. To enable geocell to be expanded and installed with ease, it is often necessary to secure the product along one side of the slope, using a suitable fixing method. Please use fixing pins during installation (see the picture below) or U shape pins. Once the product has been fixed on one side, it can then be expanded, along the length of the slope, until the desired cell shapes and sizes are achieved. If the geocell panel is too long, it can be cut to size using a pair of scissors. However, if more than one panel of geocell is to be installed on the same surface the panels can be joined together by stapling and further pinning.

(d) Infilling of Cell

After the geocell has been fixed and anchored in place, in-filling of the cells may be carried out. For general convenience, it may be advisable to commence filling from the toe (bottom) of the slope. The in-filled cells, at the lower part of the slope, will provide a platform for in-filling the upper cells. If required, the in-fill can be compacted into place using an appropriate method, which should not damage the fabric of the geocell. It is very important to ensure that the geocell is completely covered, after in-filling. Prolonged exposure to sunlight will directly affect the product's longevity.



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