

# HUITEX<sup>®</sup>

G E O C E L L



**HUITEX<sup>®</sup> GEOCELL** is fabricated by HDPE Geomembrane strips with same pure resin and adequate carbon black and antioxidant package, using supersonic welding skill to create three-dimensional structure.

## Function

In terms of the effectiveness of confinement, GEOCELL has more attractive features due to its 3D structure than any other planar Geosynthetics reinforcement.

It provides not only erosion control and drainage system but increases slope stability and ground confinement.

## Finish / Surface

Smooth or textured are available with perforation.

## Quality Assurance

As a leading Geomembrane manufacturer more than 20 years, HUITEX<sup>®</sup> quality assurance is fully complied with the international standard. Our quality management systems are certified to ISO9001 and ISO14001. The in-house daily testing program maintains strictly quality assurance procedures and quality standards.

## Infill material

The infill material is included but not limited to sand, aggregate and concrete, the filled cells being interconnected, HUITEX<sup>®</sup> Geocell acts like a stiff mat that spread the applied load over an extended area.

## Accessories

Customized J Hook and Tendon are available for options.





HUITEX® Geocell is made by Geomembrane with same pure resin and adequate carbon black and antioxidant package, using supersonic welding skill to create three-dimensional structure.

The filled cells being interconnected, HUITEX® geocell acts like a stiff mat that spreads the applied load over an extended area.

HUITEX® geocell provides efficiently solution for reinforcement system end erosion control.

As a leading Geomembrane manufacturer more than 20 years, HUITEX® quality assurance is fully complied with the international standard.

Our quality management systems are certified to ISO 9001 ISO14001.

Also, as a stock listed company in Taiwan, HKC promises to provide quality products and services to our valued customers worldwide with long-term performance guarantee.



**HUITEX**®  
www.huitex.com



# APPLICATION

The utilization of HUITEX<sup>®</sup> Geocell and infill materials provide versatile and economical solutions for many applications including:

## Slope Protection

HUITEX<sup>®</sup> Slope Protection System prevents sliding or sloughing off by providing sufficient weight at the foot and/or along the face of the slope.

## Earth Protection

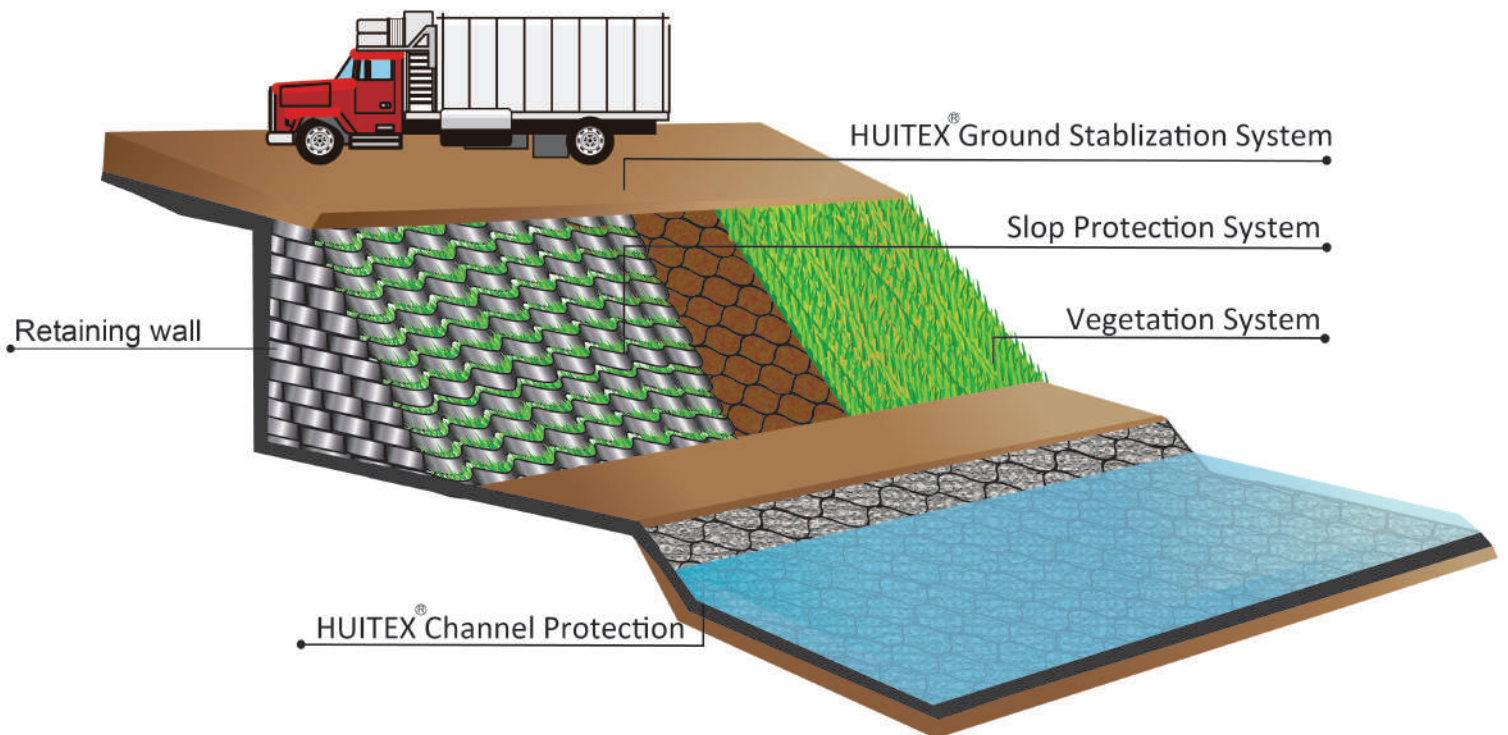
HUITEX<sup>®</sup> Earth Protection system minimizes and eliminates erosion actions of wind and water on exposed soils.

## Ground Stabilization

HUITEX<sup>®</sup> Ground Stabilization System provide cost-effective solution to ground stabilization project.

## Channel Protection

HUITEX<sup>®</sup> Channel Protection System protects channel slopes from soil erosion and confines the infill materials that form the channel bed and banks.





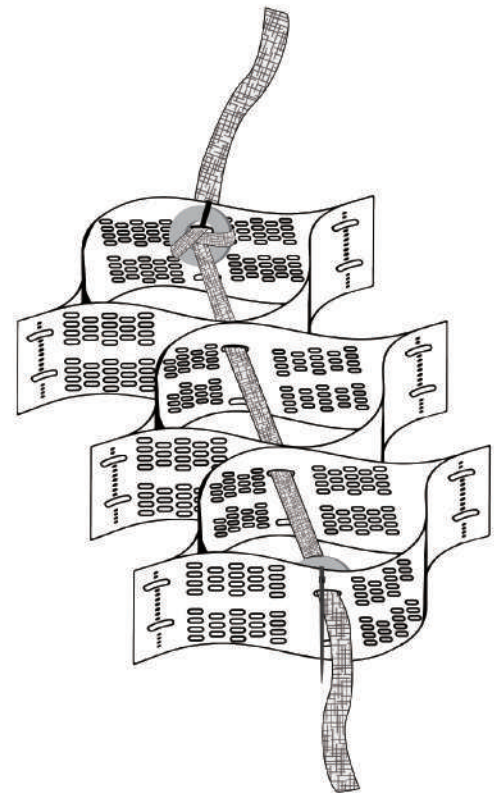
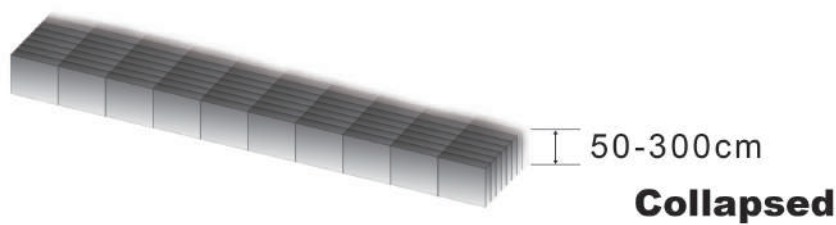
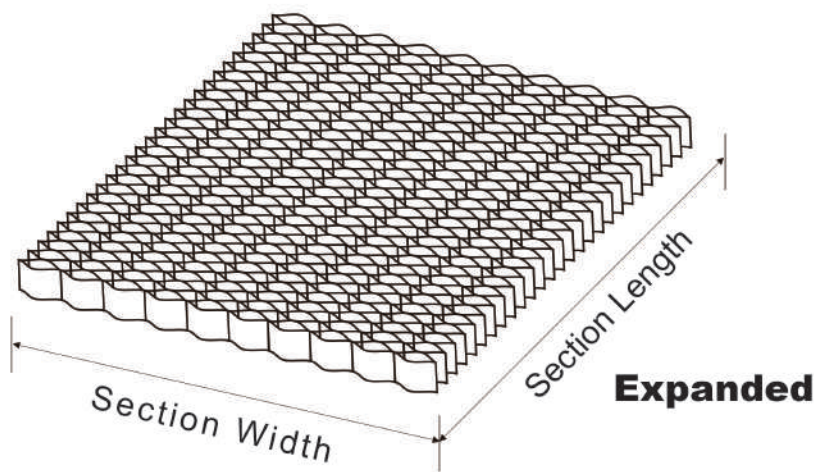
# HUITEX<sup>®</sup> Geocell

Dynamic Cellular Confinement System

HUITEX<sup>®</sup> Geocell is an innovative geosynthetic product providing cost-effective solutions for ground stabilization, erosion control and earth retention difficulties.

HUITEX<sup>®</sup> Geocell is a lightweight and flexible cellular structure made of polyethylene strips. These strips are ultrasonically bonded together to form this extremely strong configuration.

A variety of infill materials can be filled into HUITEX<sup>®</sup> Geocell system; aggregate, concrete, sand, soil, etc.



**Tendon**



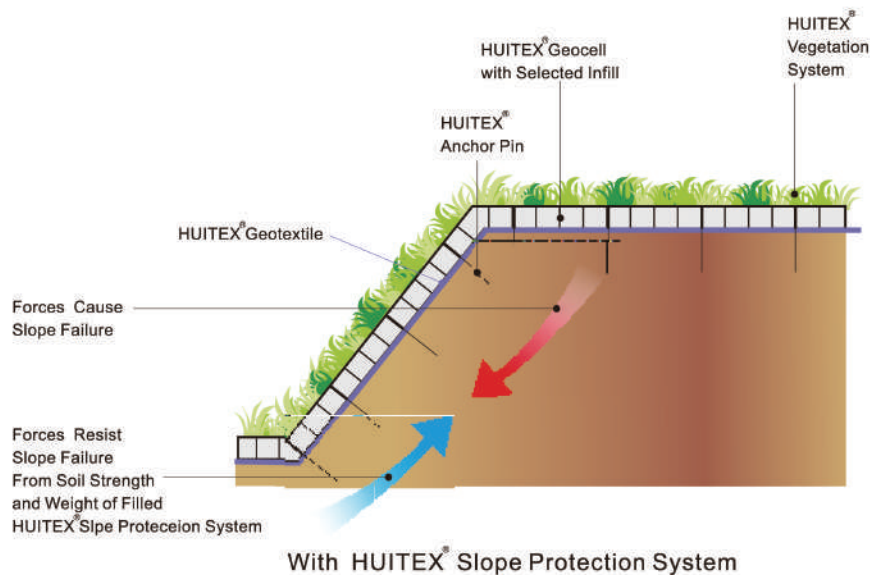
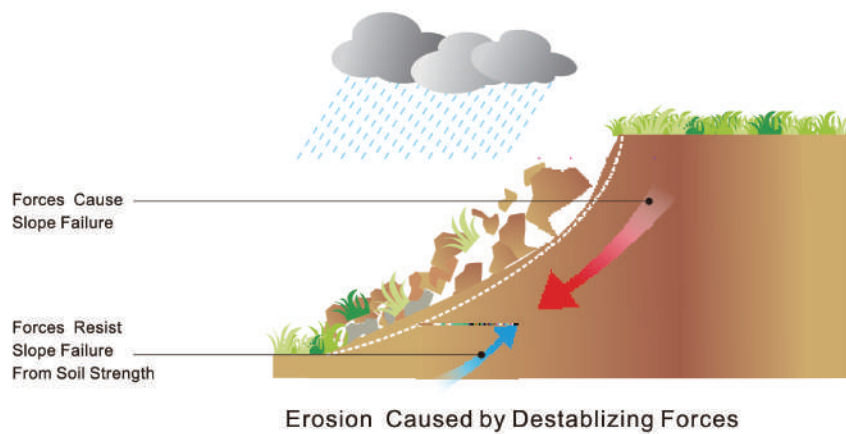
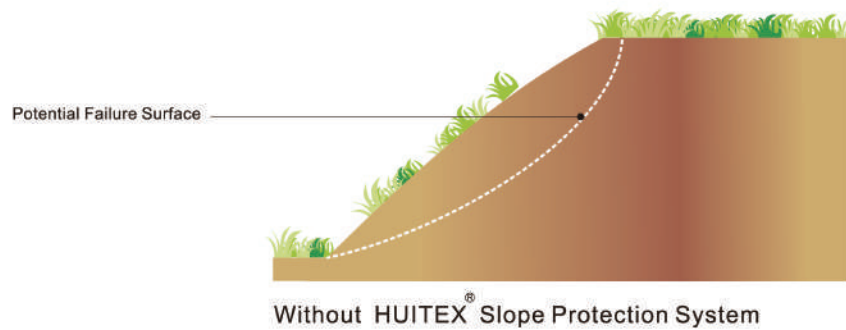




# Slope Protection

HUITEX<sup>®</sup> Slope Protection System provides excellent protection for slopes against erosion through its designed expandable, strong, and cellular structure. It confines desired infill and resists downward migration of materials due to hydraulic flows.

The infill materials are based upon the requirements of projects. Topsoil is for well establish HUITEX<sup>®</sup> Vegetation System; granular infill is for non-vegetation slopes; concrete is best for hard, durable protection for severe conditions.



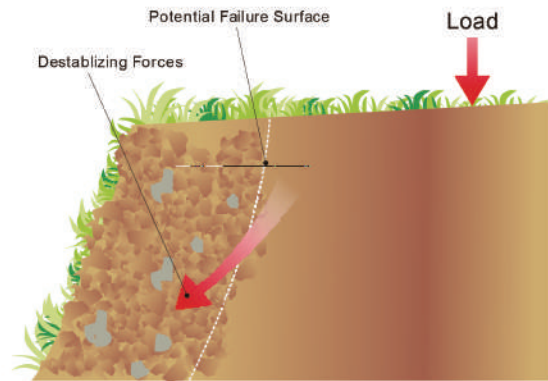


# Earth Protection (Retaining wall)

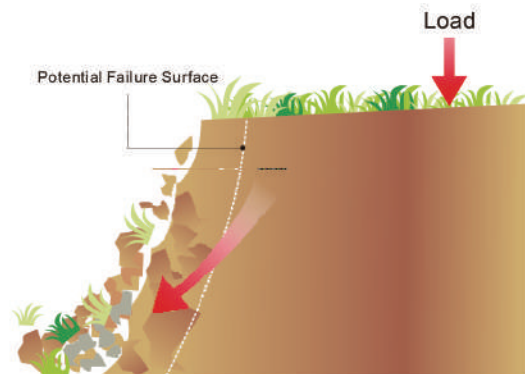
Earth retention system is structures built for the purpose of stabilizing very precipitous slopes using minimal land area. There are two basic types of earth retention system :

- Cantilever retaining wall is usually made of reinforced concrete and acts as a structural membrane.
- Gravity retaining wall has a vertical or near vertical face and its ability to retain the soil depends on gravity. Typically composed of unreinforced concrete or soil. If made of soil, the wall generally consists of a fascia and one or more layers of reinforcing members ( geotextile, grid, metal strips,etc. ) extending from the fascia back into the soil mass.

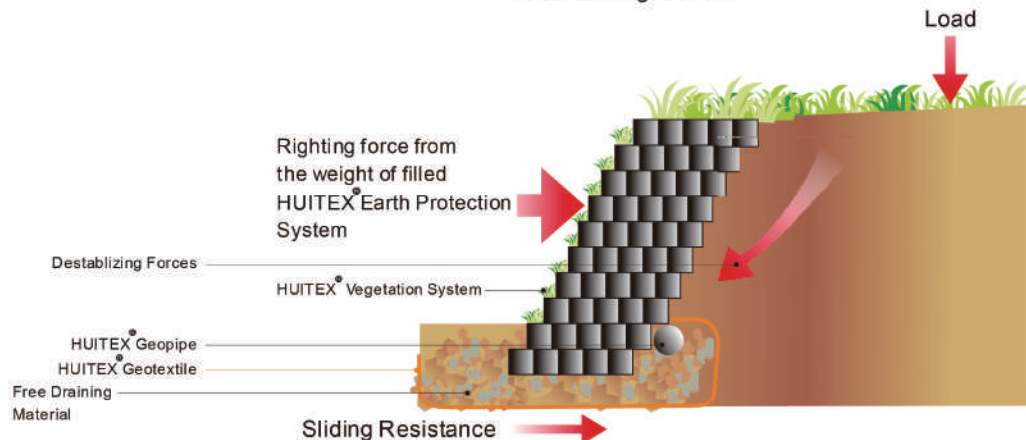
HUITEX® Earth Retention System is durable and resistant to water which offers more flexible cost-effective retaining system than conventional earth retention system.



Without HUITEX® Earth ProtectionSystem



Erosion or Sloughing off Face Caused by Destabilizing Forces



With HUITEX® Earth ProtectionSystem



**before**

**after**





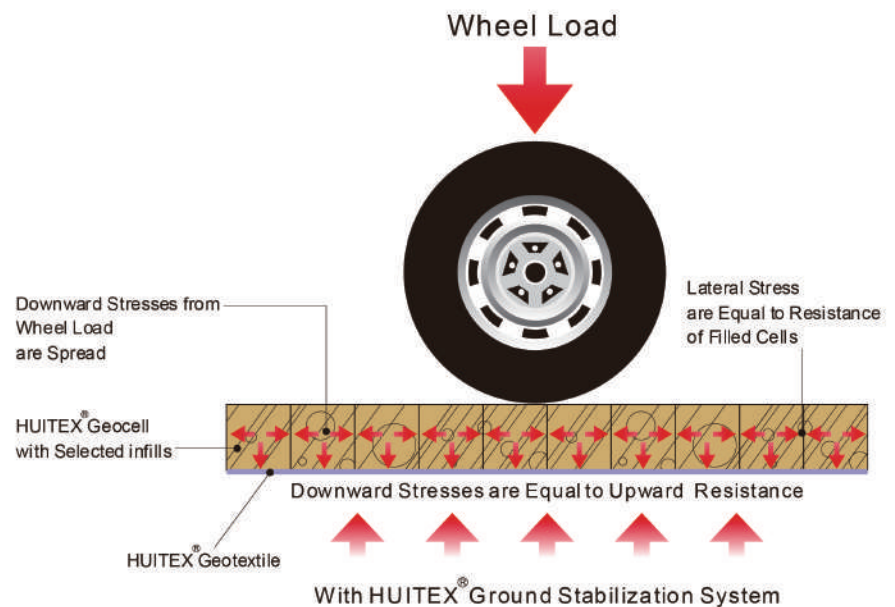
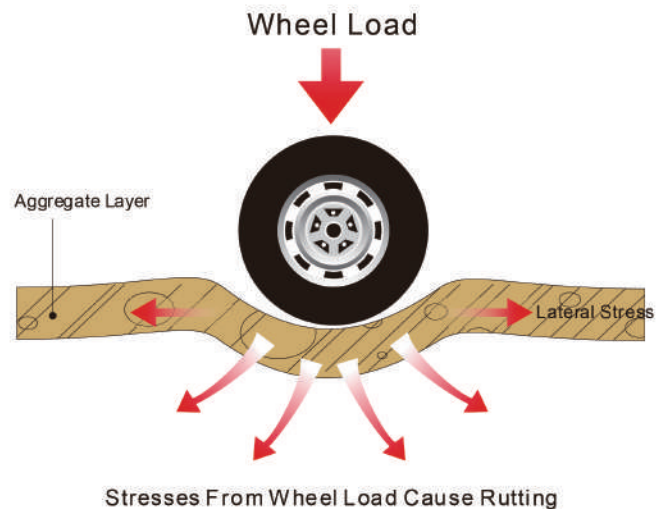


# Ground Stabilization

HUITEX® Ground Stabilization System stabilizes a poor load bearing soil significantly. The walls of three dimensional cellular confinement systems keep the infill materials from being pushed away from the applied stresses. Because filled cells are connected together, the panel works like a large mat. Applied stresses are spread over an extended area instead of directly at the point of contact.

HUITEX® Ground Stabilization System provides a temporary or permanent load support system, which can be easily relocated or reused. There are several infill materials to choose from, including sand, aggregate, and concrete.

HUITEX® Ground Stabilization System provides a cost-effective solution to ground stabilization projects.





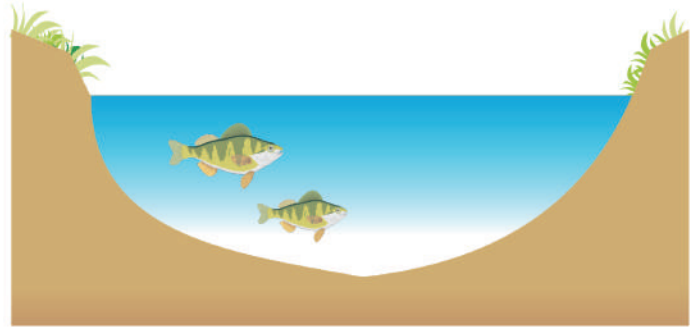
# Channel Protection

Channel wall erosion is similar to slope erosion except channel walls are likely to be shorter in height, the water flows are parallel to the slope, and the water velocities are usually much higher.

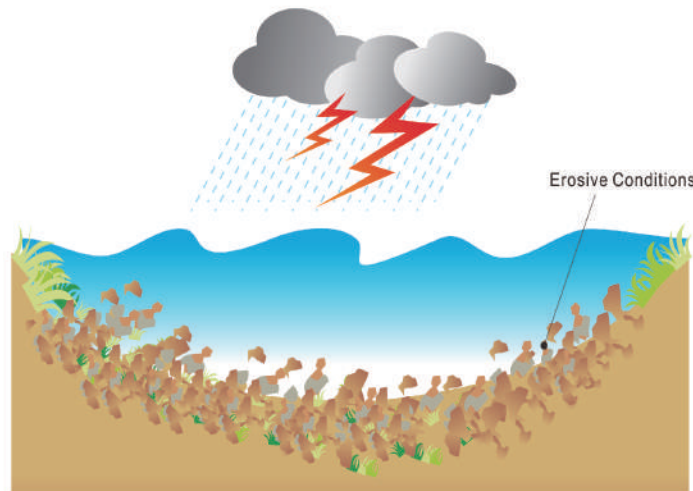
Stability of slopes and channels is an increasingly common problem as engineers seek to minimize man's impact on the fragile environment. HUITEX® Geocell system provides the answer to this problem.

HUITEX® Channel Protection System protects channel slopes from soil erosion and confines the infill material that forms the channel bed and banks.

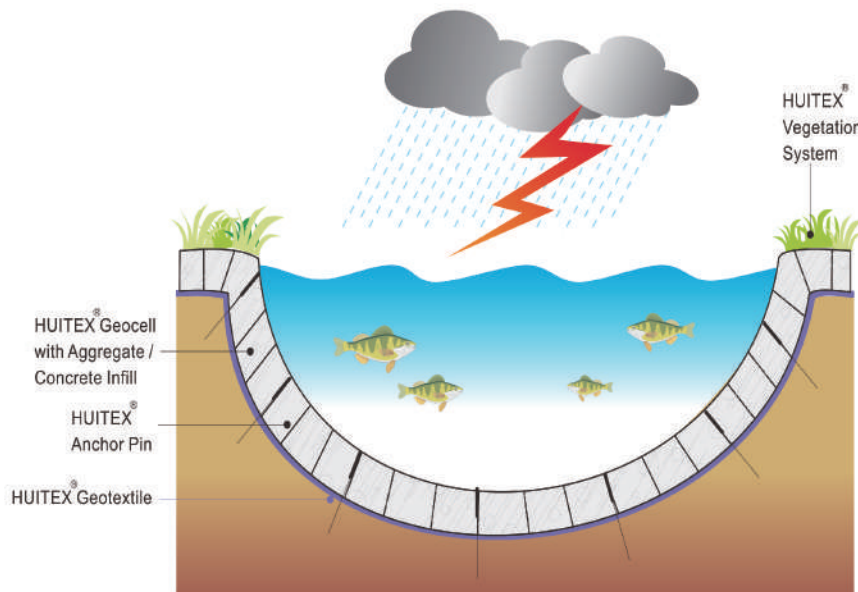
HUITEX® Channel Protection System's three dimensional structure effectively improves the hydraulic performance of conventional protection material such as aggregate, concrete, gravel, vegetation and rip-rap by confinement within the cellular structure. Channel embankments can be protected from severe erosive conditions and continuous flow conditions by using HUITEX® Channel Protection System.



Without HUITEX® Channel Protection System



Hydraulic Stresses Damage Channel Bed and Embankment



With HUITEX® Channel Protection System

# HUITEX<sup>®</sup> HDPE Geocell Specification

Material Property	Test Method	Nominal Value
Density, g/cm <sup>3</sup>	ASTM D1505/D792	0.94
Color <sup>(1)</sup>	--	Black
Carbon Black Content, %	ASTM D1603	> 1.5
Sheet Thickness, mm	ASTM D5199	1.3 -5% +10% (Smooth)
		1.5 -5% +10% (Textured) <sup>(2)</sup>
ESCR, hours	ASTM D5397	>600
ESCR, hours	ASTM D1693	>5000

(1) Tan, Green and other colors are available, the adequate additives are used for the UV resistance.

(2) The textured surface is embossed with a multitude of rhomboidal (diamond shape) indentations.

Cell Products	Welded Range, mm	expanded cell size(2)		Welded Range, mm	expanded cell size(2)		expanded section area(3), m <sup>2</sup>	Cell Open Area(4), %
		Width, mm	Length, mm		Width, mm	Length, mm		
<b>GC Series</b>	355	259	224	355	259	224	17.5	14
<b>GD Series</b>	710	510	475	710	510	475	36.5	13.5
<b>GE Series</b>	446	320	287	446	320	287	22.1	14
Seam Property	Cell Depth, mm			Seam Peel Strength, N			Seam Hang Strength	
	75			1060			A 100mm wide seam sample will support a 72.5kg load for 30 days minimum, or a 100mm seam sample support a 72.5kg load for 7 days minimum undergoing a temperature change from 23°C to 53°C on a 1 hour cycle.	
	100			1420				
	150			2130				
	200			2840				

(1) All the dimensions and area described above are the nominal values.

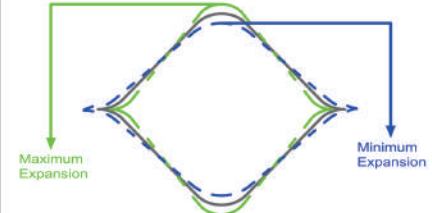
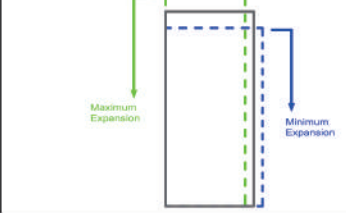
(2) The cell size will vary  $\pm 10\%$  and the cell area will vary  $\pm 1\%$  approximately.

(3) The section area will vary  $\pm 1\%$ .

(4) The HDPE strips will be perforated with 10 mm diameter, the open area will vary  $\pm 1\%$ .

This information is provided for reference purposes only and is not intended as a warranty or guarantee. Huikwang Corporation (HKC) assumes no liability in connection with the use of this information. HKC reserves the right to change the specification contained herein without notice. Please contact HKC for the latest version of specification. HUITEX<sup>®</sup> and HKC marks used in this document are registered trademarks and properties of Huikwang Corporation.

## Geocell Cell/Section Details

Product	GC Series	GD Series	GE Series	Product	GC Series	GD Series	GE Series
Relative Cell Expanded Size				Relative Section Expanded Size			
Maximum cell Expanded Size Width x Length, mm $\pm 10\%$	230 x 245	460 x 522	288 x 317	Maximum cell Expanded Size Width x Length, m	2.3 x 7.35	2.3 x 15.66	2.3 x 9.51
Minimum Cell Expanded Size Width x Length, mm $\pm 10\%$	280 x 206	560 x 428	350 x 261	Minimum cell Expanded Size Width x Length, m	2.8 x 6.18	2.8 x 12.84	2.8 x 7.83



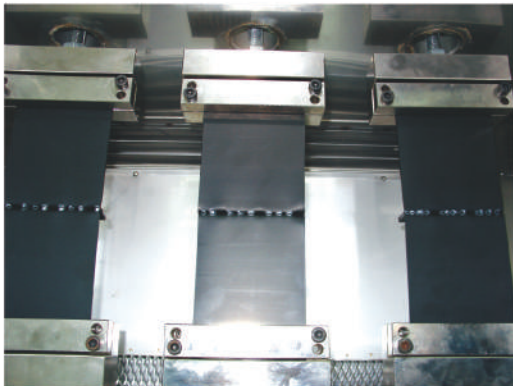
# HKC Quality Manifesto


As a public listed corporation with 50-year history, HKC is dedicated in supplying superior geocell products to generate an effective confinement solution with sound and long-term performance guarantee.

HUITEX<sup>®</sup> Geocell is manufactured by our innovative facilities with consistent QC/QA programs throughout the production processes. The material is made of premium polyethylene resin designed specially for Geocell production along with high-performance additives.

HKC' s management system is certified to ISO 9001:2015 and 14001:2015. Strict tests are conducted in accordance with ASTM or compatible international standards.

HUITEX<sup>®</sup> MQC/MQA Manual is available upon request.



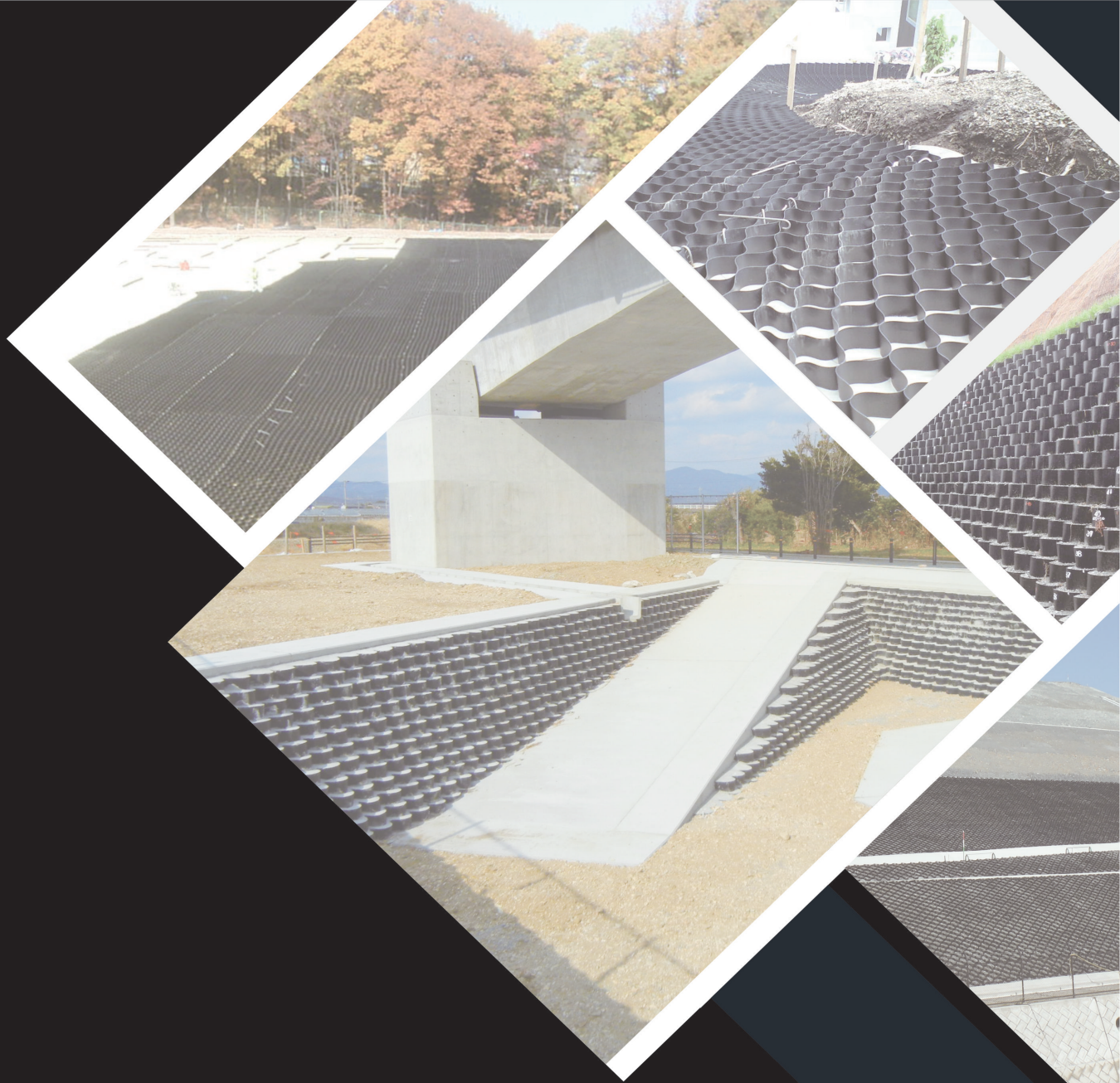


HUITEX 's strict QA/QC programs conform to or exceed the GRI GM13 and GM17 standard and are certified to affix the CE marking. HUITEX<sup>®</sup> products are marketed in more than 50 countries and used in a number of significant environmental projects in every continent with sound performance records. HUITEX<sup>®</sup> is a member of International Geosynthetics Society (IGS), Industrial Fabrics Association International(IFAI), Geosynthetic Material Association (GMA) and International Association of Geosynthetics Installers (IAGI).

HUITEX<sup>®</sup> is the Environmental Business Group of Huikwang Corporation (HKC), a listed company founded in 1965.

**ISO 9001:2015**  
**ISO 14001:2015**





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