

# GEO PRODUCTS, LLC

---

GEOCELL MANUFACTURER  
GEOSYNTHETICS SUPPLIER

---



## PRODUCT COLLECTION

---

**EnviroGrid® Geocell**  
*Cellular Confinement System*

**EnviroWall™**  
*Retaining Wall Block*

**EnviroGuard™ Liner**  
*Geomembrane*

**Concrete Canvas®**  
*Concrete on a Roll™*

[WWW.GEOPRODUCTS.ORG](http://WWW.GEOPRODUCTS.ORG)



# ENVIROGRID®

---

# GEOCELL

**PAGE 01**

OVERVIEW OF  
GEOCELL

**PAGE 02**

ENVIROGRID®  
PRODUCTS

**PAGE 03**

TYPICAL  
APPLICATIONS

**PAGE 04**

FEATURES AND  
BENEFITS

**PAGE 05**

SPECIFICATION  
SHEET

**CONTACT**

Austin Bear

[abear@geoproducts.org](mailto:abear@geoproducts.org)

713.248.0902



Developed in the late 1970's by The U.S. Army Corps of Engineers and manufactured by Geo Products since 1990, geocell cellular confinement has been used worldwide as a solution to soil stabilization issues.

EnviroGrid® geocell is made by ultrasonically welding plastic strips made from 100% virgin HDPE resin to form a honeycomb-like structure.

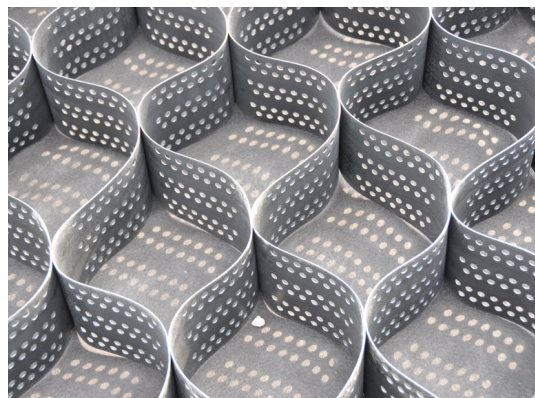


## ENVIROGRID® GEOCELL | CELLULAR CONFINEMENT SYSTEM

EnviroGrid® makes it possible to construct sustainable roads over soft soils. By boosting the weight bearing ability of the rolling course, geocell helps prevent rutting and erosion in high-traffic areas. The amount of infill material is reduced and also allows for locally available aggregate, with less maintenance required over time.

SUB-GRADE IMPROVEMENT  
HEAVY LOAD SUPPORT  
INCREASED INFILL STABILITY

ACCESS ROADS | HAUL ROADS | RIG PADS





# PANEL SIZING

## ENVIROGRID® GEOCELL

There are various cell apertures or sizes as well as cell heights offered. The sizing of material is dependent on the specific application for which the product is being used. EnviroGrid® is packaged and shipped in collapsed panels for ease of shipping and handling, and are installation-ready.

### CELL APERTURES:

EGA 20 EGA 30 EGA 40



### CELL HEIGHTS:

3" 4" 6" 8"



### ACCESSORIES:

ENVIROCLIP™ TWIST ANCHOR  
ENVIROLOCK PANEL CONNECTION



\*Above are the typical cell dimensions that are offered. Custom cell heights can be manufactured for specific projects.

## CERTIFIED FIELD TESTING

Large-scale performance testing of all EnviroGrid® products were conducted by a third-party national lab to verify its true field performance. Throughout a series of cyclical load plate tests under various pressures to simulate rolling course traffic, measurements were taken throughout the four tests below.

CYCLIC STRESS AT SUB-BASE	EXTENDED CYCLIC AUTOMATED PLATE LOAD	INFILL MATERIAL DEFORMATION	STATIC STRAIN MODULUS
------------------------------	---	--------------------------------	--------------------------

## INTERNAL CAPABILITIES

DESIGN & ENGINEERING SUPPORT

- Build-A-Spec Generator Tool
- Installation Support
- Design Calculators
- Specific Cad Details
- Case Studies/Pictures/Videos

[www.geoproducts.org/technical-design](http://www.geoproducts.org/technical-design)

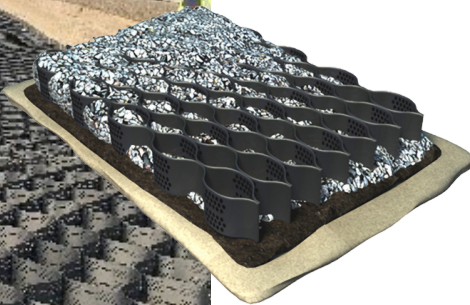






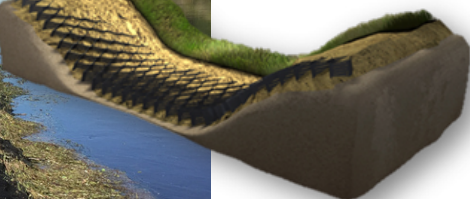
## BASE STABILIZATION

The expanded panels act as a large mat, distributing applied loads over an extended area. The three-dimensional cells increase strength and stiffness of the infill, which boosts their weight-bearing capabilities and allows for the use of permeable aggregates.



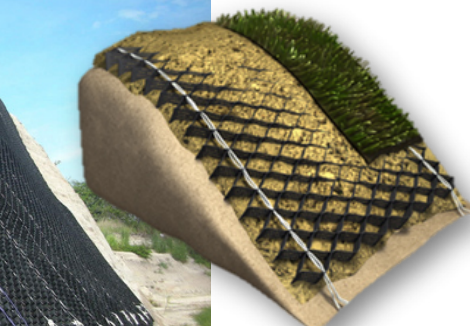
## CHANNEL PROTECTION

EnviroGrid® is successful at protecting channels by counteracting various flow velocities. It can be laid directly on the slope and properly anchored. Based on the channel characteristics, EnviroGrid® can be filled with angular rock, vegetated soil, or concrete. Geo Products offers the needed anchoring for the system's integrity.



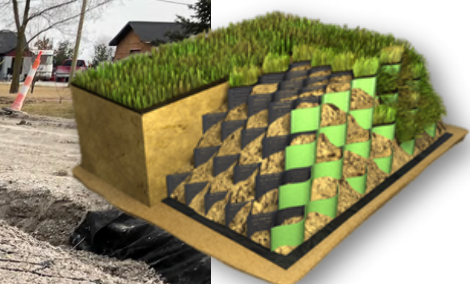
## SLOPE EROSION CONTROL

EnviroGrid® placed on slopes will hold infill material in place. The cell walls slow the flow of water down the slope or in areas affected by wave action, reducing the formation of rills, a major cause of soil erosion. Depending on the site specific application, EnviroGrid® can be filled with angular rock, concrete or native soils.



## RETAINING WALLS

In very steep slope applications, soils can be retained with a vertical wall structure. Filled with local soils, EnviroGrid® can be used in both cut and fill situations by holding the soil in place and providing drainage throughout the structure. The outer cells can be vegetated, providing an environmentally pleasing look.





# PRODUCT BENEFITS

## SOIL STABILIZATION APPLICATIONS

### MINIMIZE MAINTENANCE

Take control of high-traffic areas by installing EnviroGrid® to prevent erosion and formation of potholes.

### REDUCE INFILL MATERIAL

EnviroGrid® allows the use of local infill material and reduces material needed by 2/3, reducing costs even more.

### MAXIMIZE STABILITY

The high-strength cell walls increase strength and stiffness of the infill material, which boosts their weight-bearing capabilities.



## SOIL STABILIZATION | CASE STUDY

Devon Energy was seeking a cost-effective yet sustainable way to construct haul roads over soft, native soils with poor load-bearing capabilities. The ability to use less expensive on-site material to build the roads while still supporting heavy loads under these conditions were the primary benefits of using EnviroGrid® over alternative methods.

---

The roads were graded and compacted and the EnviroGrid® panels were installed over a non-woven geotextile fabric. EnviroGrid® was filled with local sands, compacted and ready for traffic. EnviroGrid® provided a reliable system to construct the haul roads over the existing soft soils using locally available infill material. The confinement system keeps the non-cohesive material in place and provides stability to once poor load bearing material.

Please call us at **281.820.5493** or visit our website **[www.geoproducts.org](http://www.geoproducts.org)** for full & preliminary design support, CAD drawings, additional detailed case studies and more information.







**Geo Products, LLC**  
 12626 North Houston Rosslyn Rd.  
 Houston, TX 77086  
[www.geoproducts.org](http://www.geoproducts.org)  
[info@geoproducts.org](mailto:info@geoproducts.org)  
 281.820.5493

# ENVIROGRID® GEOCELL

## SPECIFICATIONS

EnviroGrid® is a three dimensional cellular confinement system that provides confinement and reinforcement to granular material. Therefore, it can be used for load support, erosion control, slope protection and retaining wall construction. The EnviroGrid® sections are manufactured from 58 strips of HDPE, resulting in a section length of 29 cells. Each strip is the approved width and 142 inches (3.6m) in length.

MATERIAL PROPERTIES	TEST METHOD	UNIT	TEST VALUE
Polymer Density	ASTM D 1505	lb/ft <sup>3</sup> (g/cm <sup>3</sup> )	58.4 - 60.2 (0.935 - 0.965)
Environmental Stress Crack Resistance	ASTM D 5397	hours	>400
Environmental Stress Crack Resistance	ASTM D 1693	hours	6000
Carbon Black Content	ASTM D 1603	% by weight	1.5% minimum
Nominal Sheet Thickness <sup>1</sup> before texturing	ASTM D 5199	mil (mm)	50 (1.27) -5%,+10%
Nominal Sheet Thickness <sup>1</sup> after texturing	ASTM D 5199	mil (mm)	60 (1.52) -5%,+10%

\*Polyethylene strip shall be textured with a multitude of rhomboidal (diamond shape) indentations. The rhomboidal indentations shall have a surface density of 140 to 200 per in<sup>2</sup> (22 to 31 per cm<sup>2</sup>).

<sup>1</sup> The Nominal Sheet Thickness is an average thickness of the sheet, taken from the mean of 10 readings.

Product	Nominal-Expanded Cell Size (width x length) in (mm)	Nominal-Expanded Cell Area in <sup>2</sup> (cm <sup>2</sup> )	Nominal-Expanded Section (width x length) ft (m)	Nominal-Expanded Section Area ft <sup>2</sup> (m <sup>2</sup> )	Minimum-Expanded Section (width x length) ft (m)	Maximum-Expanded Section (width x length) ft (m)	Cell Depth in (mm)	Seam Peel Strength lbf (N)	Percent Cell Wall Open Area (%)	Seam Hang Strength
EGA20	10.2 x 8.8 (259 x 224)	44.8 (289)	8.4 x 21.4 (2.56 x 6.52)	180 (16.7)	9.2 x 19.4 (2.8 x 5.9)	7.6 x 23.3 (2.3 x 7.1)	3 (75)	240 (1060)	16 ± 1%	A 4 in (102mm) weld joint supporting a load of 160 lbs (72.5 kg) for 30 days minimum or a 4 in (102mm) weld joint supporting a load of 160 lbs (72.5 kg) for 7 days minimum while undergoing temperature change from 74°F (23°C) to 130°F (54°C) on a 1 hour cycle.
							4 (100)	320 (1420)	11 ± 1%	
							6 (150)	480 (2130)	16 ± 1%	
							8 (200)	640 (2840)	11 ± 1%	
EGA30	12.6 x 11.3 (320 x 287)	71.3 (460)	8.4 x 27.4 (2.56 x 8.35)	230 (21.4)	9.2 x 24.8 (2.8 x 7.6)	7.6 x 30.0 (2.3 x 9.1)	3 (75)	240 (1060)	16 ± 1%	
							4 (100)	320 (1420)	11 ± 1%	
							6 (150)	480 (2130)	16 ± 1%	
							8 (200)	640 (2840)	11 ± 1%	
EGA40	20 x 18.7 (508 x 475)	187 (1206)	8.4 x 45 (2.56 x 13.72)	378 (35.14)	9.2 x 40.9 (2.8 x 12.5)	7.6 x 49.7 (2.3 x 15.1)	3 (75)	240 (1060)	16 ± 1%	
							4 (100)	320 (1420)	11 ± 1%	
							6 (150)	480 (2130)	16 ± 1%	
							8 (200)	640 (2840)	11 ± 1%	

This information is provided for reference purposes only and is not intended as a warranty or guarantee. Geo Products, LLC assumes no liability in connection with the use of this information. Check with Geo Products, LLC for current, standard minimum quality assurance procedures. GPESV Rev 1/2020



GEOMEMBRANE

# ENVIROGUARD™



**PAGE 06**  
PRODUCT  
OVERVIEW

**PAGE 07**  
TYPICAL  
APPLICATIONS &  
PRODUCTS

**CONTACT**  
John Oberly  
[joberly@geoproducts.org](mailto:joberly@geoproducts.org)  
281.685.0745



# ENVIROGUARD™ PRE-FABRICATED PADS



EnviroGuard™ Liner, a division of Geo Products, specializes in offering custom-fabricated polyethylene geomembrane for liner applications. Our geomembranes are custom fabricated in-house with superior quality control standards, packaged, and ready to be installed immediately.

PIT LINERS  
MINING OPERATIONS  
SECONDARY CONTAINMENT  
TEMPORARY & RAIN COVERS  
WATERSHEDS

ENERGY | INDUSTRIAL | ENVIRONMENTAL | MINING





# PRODUCT BENEFITS

## PRE-FABRICATED PANELS

**MAXIMIZE  
EFFICIENCY**

**CONSISTENT  
SEAMS**

**REDUCE  
COSTS & TIME**

## PRODUCTS PRE-FABRICATED LINERS

- Increased Design Flexibility
- Tailored to Project Specifications
- Factory-Seamed for Greater Strength
- Seamless Installation

## FABRICATION SERVICES

**HDPE & LLDPE  
12MIL - 80MIL  
ROLL STOCK | LINERS**

## INSTALLATION SERVICES

On-site seam welding with the latest equipment and technology is offered and backed by over 50 years of combined experience in field installation. Our team of experts are available to support your next installation.







# ENVIROWALL™

## RETAINING WALL BLOCKS

**PAGE 08**  
PRODUCT  
OVERVIEW

**PAGE 09**  
TYPICAL  
APPLICATIONS &  
PRODUCTS

**CONTACT**  
[info@geoproducts.org](mailto:info@geoproducts.org)  
281.820.5493



# ENVIROWALL™

## RETAINING WALL BLOCKS

LANDSCAPING

HOME  
IMPROVEMENT

GARDENING

### RETAINING WALLS, SIMPLIFIED.

EnviroWall™ Blocks are small-scale, plastic retaining wall blocks designed to be planted to yield vegetation coverage that provides an aesthetically pleasing solution to promoting grade changes and controlling erosion. Designed for ease of shipping, handling and installation, EnviroWall™ offers an array of benefits.

#### EASE OF SHIPPING & HANDLING



- Removable side rails allow blocks to be nested for transport efficiency and cost savings
- Lightweight, stackable pieces at 2.5 lbs each



#### DESIGN COMPONENTS

- Made in the USA
- Allows use of compost sock for additional erosion control
- Construct walls up to 5' tall with little to no tools or equipment

#### VEGETATION SUPPORT



- Designed with holes for roots to grow through the system, maximizing stability.
- Able to support various vegetation and plant life



#### ECO-FRIENDLY SOLUTION

- Supports various vegetation and plant life.
- Able to calculate carbon footprint when using compost that is organic, mature, free of weeds and debris

For product and installation support guides, videos, and downloads, scan the QR Code to visit our website.



281.820.5493  
[WWW.RETAININGWALLBLOCKS.SHOP](http://WWW.RETAININGWALLBLOCKS.SHOP)

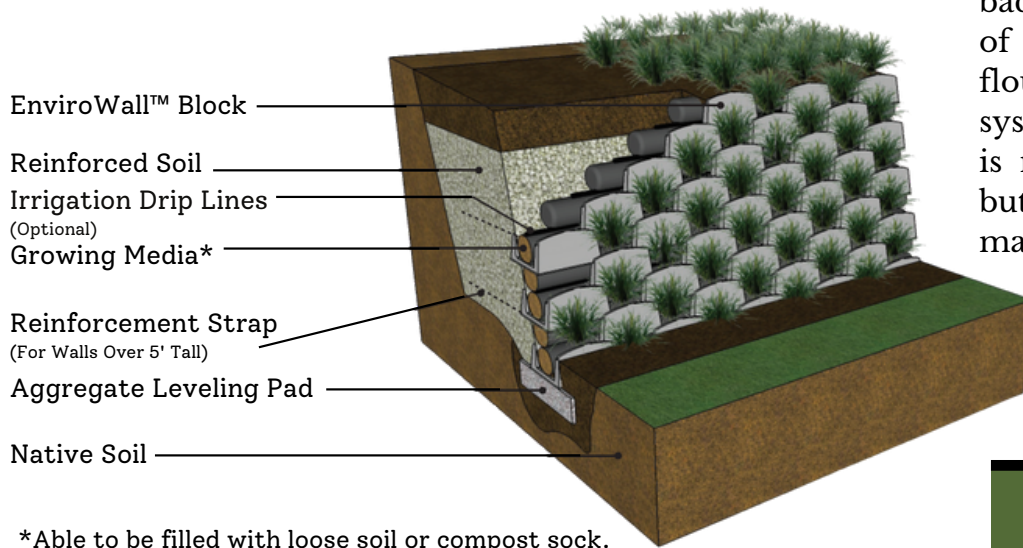
EnviroWall™ | 08



# ENVIROWALL™

## RETAINING WALL BLOCKS

EnviroWall™ Blocks compose a vertical living wall system that provides a front face to existing structurally sound slope backgrounds. The technology and design of each block allows vegetation to flourish within the structure, making the system visually appealing. EnviroWall™ is not only environmentally compliant, but is simple to handle, install, and maintain.

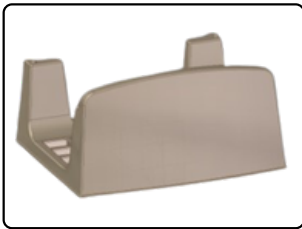


\*Able to be filled with loose soil or compost sock.

### AVAILABLE COLORS

GREEN

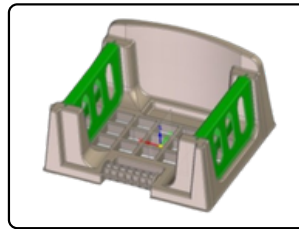
GRAY



**LIGHTWEIGHT  
DESIGN**



**REMOVABLE  
SIDE RAILS**



**STACKABLE  
PIECES**



Each EnviroWall™ block has been rigorously tested in engineering labs and proves 5 times stronger than the service life of alternative slope facings that structures under five feet would generally require.

## FLOWERBEDS | LANDSCAPE | DRIVEWAYS | GARDENS





# CONCRETE CANVAS®

---

# CONCRETE ON A ROLL™

**PAGE 10**  
PRODUCT  
OVERVIEW

**PAGE 11**  
PRODUCT  
DETAILS &  
BENEFITS

**PAGE 12**  
CASE STUDY

**CONCRETE**  
**CANVAS® USA**

**CONTACT**  
John Oberly  
[joberly@geoproducts.org](mailto:joberly@geoproducts.org)  
281.685.0745





# CONCRETE ON A ROLL™

Concrete Canvas® (CC) is a Geosynthetic Cementitious Composite Mat (GCCM) that provides an environmentally friendly and cost-effective alternative to traditional concrete products. Able to be installed directly over terrain, CC is simply activated by spraying the system with water, significantly lowering the product and labor costs typically associated with such projects.

CC is used for a variety of purposes including civil construction and environmental applications such as:

CULVERTS / CANALS  
MINE CHANNEL LINING  
STORMWATER MANAGEMENT  
DRAINAGE SUPPORT  
ENERGY DISSIPATION



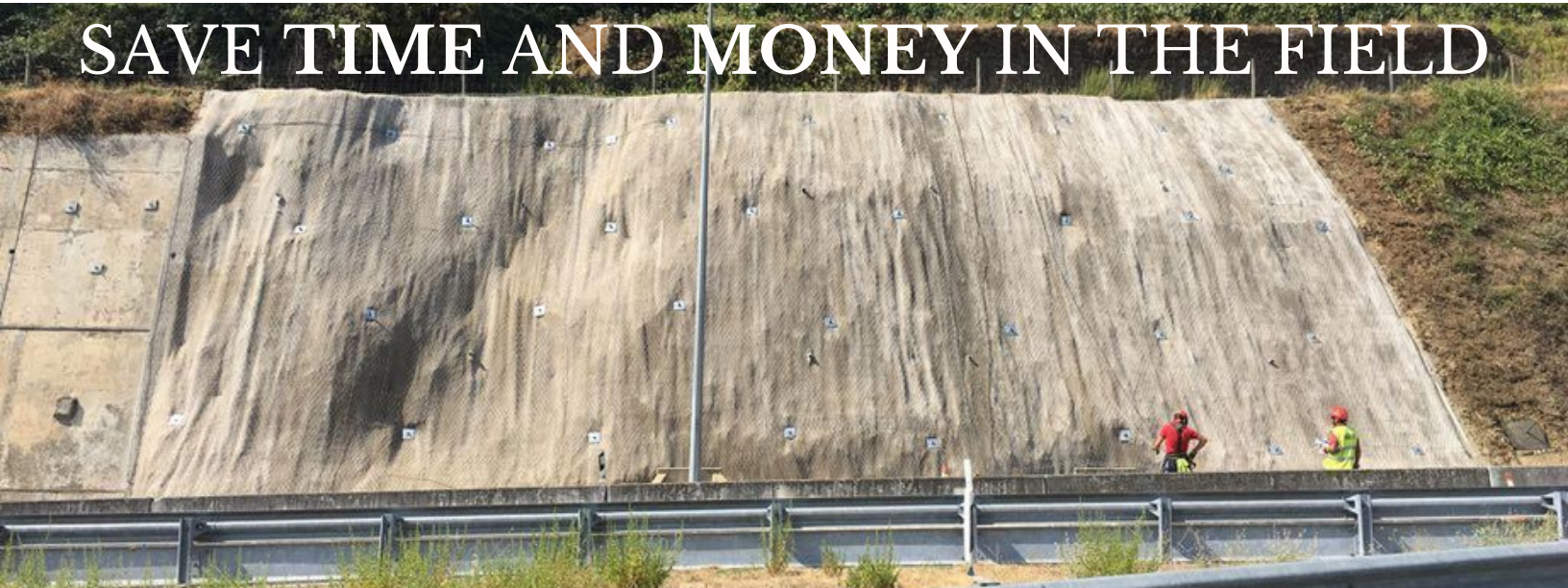
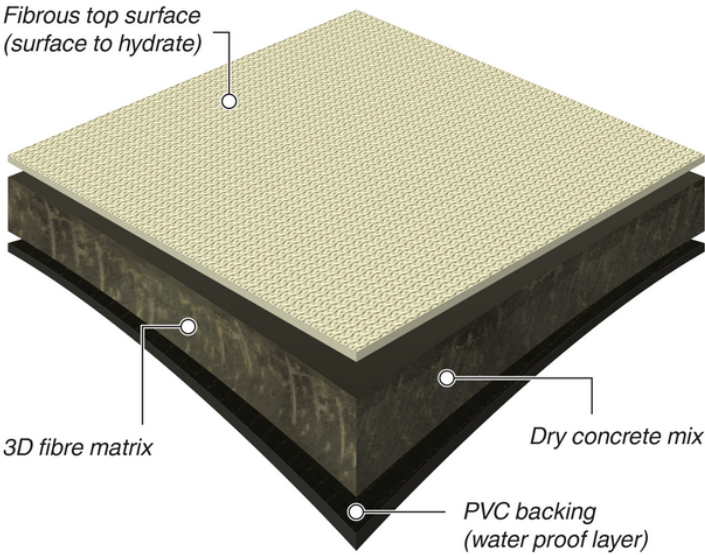


Concrete Canvas is a Geosynthetic Cementitious Composite Mat (GCCM) that is typically used to replace conventional concrete for remediation and lining applications.

THERE ARE 3 MAIN PRODUCT TYPES:

- CC5™ | 5mm thick
- CC8™ | 8mm thick
- CC13™ | 13mm thick

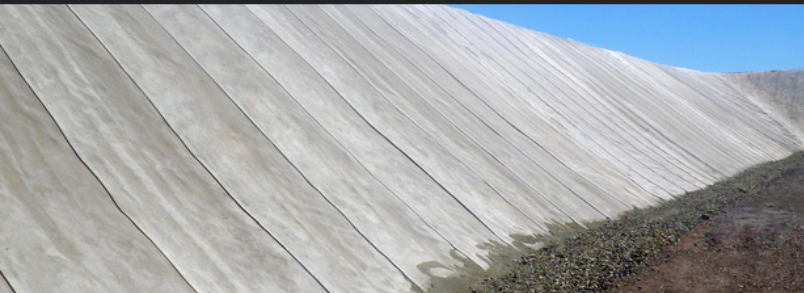
All products are able to be cut and tailored to suit the custom dimensions and specifications of any project.



SAVE TIME AND MONEY IN THE FIELD

10x Faster to Install than Conventional Concrete  
Up to 120 Years of Performance Life  
Use up to 95% less Material

- Drape characteristics allow CC to closely follow the profile of the lined terrain
- UV-resistant and twice as abrasion resistant as standard concrete
- Fiber-reinforced to prevent cracking, absorb impact, and provide stable failure mode







## SLOPE PROTECTION | CASE STUDY

Concrete Canvas® was used to provide slope protection in Rossville, TN. A rail intermodal facility had an existing steep slope armored with riprap which had deteriorated over time. An alternative solution was needed that would not only protect the slope, but provide protection to its surface and prevent saturation.

---

CC was chosen by the client who determined that it would provide the slope protection required while reducing overall maintenance and regulatory concerns. The material was laid longitudinally down the slope, and subsequent layers were overlapped and jointed using percussion earth anchors. In total, 30,000 SF were installed at rates of 1,827 SF per day, providing an efficient and quick installation.



## GEO PRODUCTS | CONCRETE CANVAS, USA

Contact us for additional product information, installation procedures, and more.

[WWW.GEOPRODUCTS.ORG/CONCRETECANVAS](http://WWW.GEOPRODUCTS.ORG/CONCRETECANVAS)



# GEO PRODUCTS, LLC

HOUSTON, TEXAS

---

## MANUFACTURER

ENVIROGRID® GEOCELL  
ENVIROWALL™ BLOCK

Austin Bear  
abear@geoproducts.org

---

## SUPPLIER

ENVIROGUARD™ LINER  
CONCRETE CANVAS®

John Oberly  
joberly@geoproducts.org

---

## LOCATION

12626 N. Houston Rosslyn Rd.  
Houston, Texas 77086  
281.820.5493 | info@geoproducts.org