GEOCELLS
PRODUCT DATA

Photograph courtesy Presto Geosystems

FOR MORE INFORMATION

Geosynthetics magazine has provided information on the geocell specification charts for comparative purposes only. Designers should contact manufacturers for additional details and to discuss site-specific considerations.

Information on the use and specification of geocells is also available from the Geosynthetic Materials Association (GMA).

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PUBLISHER'S NOTE

Geosynthetics magazine compiled all information included in the *Geosynthetics 2020 Specifier's Guide* from information submitted by firms in the geosynthetics industry. Companies provided specifications voluntarily, and specification accuracy is the responsibility of the manufacturer. The appearance of a listing in this directory is not an endorsement of the company or product by *Geosynthetics* magazine or the Industrial Fabrics Association International (IFAI). The *Geosynthetics 2020 Specifier's Guide* is intended as a guide, and *Geosynthetics* magazine and IFAI encourage readers to contact the companies listed for further information.

Companies engineer geocells for protection and stabilization applications. Engineers often use them to improve the performance of standard construction materials and erosion control treatments.

Geocell products are three-dimensional, expandable panels made from high-density polyethylene (HDPE), polyester or another polymer material. When expanded during installation, the interconnected strips form the walls of a flexible, three-dimensional cellular structure into which specified infill materials are placed and compacted. This creates a free-draining system that holds infill materials in place and prevents mass movements by providing confinement through tensile reinforcement. Cellular confinement systems improve the structural and functional behavior of soils and aggregate infill materials.

Development

Geocell products were developed in the late 1970s and early 1980s. The primary geocell applications include:

- Protection and stabilization of steep slope surfaces
- Protective linings of channels and hydraulic structures
- Static and dynamic load support on weak subgrade soils
- Multilayered earth-retaining and water-retaining gravity structures

Infill selection is primarily governed by the nature and intensity of anticipated working stresses, the availability and cost of candidate materials, and, in some instances, the aesthetic requirements for a fully vegetated appearance. Basic geocell infill types are aggregates, vegetated topsoil and concrete.

The numbers

Companies that submitted product data chart lines were asked to provide data determined through industry-accepted testing methods. Companies signed a certificate of compliance verifying the accuracy of this data.

Product Name	Polymer Type	Color	Dimensional Properties					Minimum Cell Seam Peel Strength kN (lb)	Manufacturer's Suggested Applications [7]
			Cell (expanded)			Geocell Section			
			Area cm^2 (in^2)	Depth mm (in)	Length mm (in)	Length m (ft)	Width m (ft)		
Geo Products LLC dba EnviroGrid | www.geoproducts.org									
Envirogrid EGA20 [2]	HDPE	Black, green, tan or special	289 (44.8)	75 (3), 100 (4), 125 (5), 150 (6), 200 (8), 250 (10), 300 (12)	224 (8.8)	6.52 (21.4)	2.56 (8.4)	1.065 (240), 1.42 (320), 1,775 (400), 2.13 (480), 2.84 (640), 3.55 (800), 4.26 (960)	All
Envirogrid EGA30 [2]	HDPE	Black, green, tan or special	460 (71.3)	75 (3), 100 (4), 125 (5), 150 (6), 200 (8), 250 (10), 300 (12)	287 (11.3)	8.35 (27.4)	2.56 (8.4)	1.065 (240), 1.42 (320), 1,775 (400), 2.13 (480), 2.84 (640), 3.55 (800), 4.26 (960)	All
Envirogrid EGA40 [2]	HDPE	Black, green, tan or special	1206 (187)	75 (3), 100 (4), 125 (5), 150 (6), 200 (8), 250 (10), 300 (12)	475 (18.7)	13.72 (45)	2.56 (8.4)	1.065 (240), 1.42 (320), 1,775 (400), 2.13 (480), 2.84 (640), 3.55 (800), 4.26 (960)	All
Hanes Geo Components | www.hanesgeo.com									
TerraCell 140 [2]	HDPE	Black, tan, green or custom	289 (44.8)	75, 100, 150, 200 (3, 4, 6, 8)	224 (8.8)	6.52 (21.4)✧	2.56 (8.4)	1.065, 1.42, 2.13, 2.84 (240, 320, 480, 640)	All
✧Custom lengths available									
HUITEX | www.huitex.com									
Huitex GC,GT [2]	HDPE	Black	495 (77)~2423 (376)	50 (2.0)~200 (7.9)	244 (9.6)~510 (20.1)	6.1 (20)~12.2 (40)	2.44 (8)	0.5 (110)~2 (440)	SP, CP, ER, LS, EC, ST.
Presto Geosystems | www.prestogeo.com									
Geoweb GW20V [2]	HDPE	Black, green, tan or special	289 (44.8)	75 (3)	224 (8.8) nominal ± 10%	3.7-8.3 [4] (12-27)	2.6 (8.5) nominal ± 10%	1.06 (240)	SP, CP
Geoweb GW20V [2]	HDPE	Black, green, tan or special	289 (44.8)	100 (4)	224 (8.8) nominal ± 10%	3.7-8.3 [4] (12-27)	2.6 (8.5) nominal ± 10%	1.42 (320)	SP, CP, LS
Geoweb GW20V [2]	HDPE	Black, green, tan or special	289 (44.8)	150 (6)	224 (8.8) nominal ± 10%	3.7-8.3 [4] (12-27)	2.6 (8.5) nominal ± 10%	2.13 (480)	SP, CP, LS
Geoweb GW20V [2]	HDPE	Black, green, tan or special	289 (44.8)	200 (8)	224 (8.8) nominal ± 10%	3.7-8.3 [4] (12-27)	2.6 (8.5) nominal ± 10%	2.84 (640)	SP, CP, LS
Geoweb GW30V [2]	HDPE	Black, green, tan or special	460 (71.3)	75 (3)	287 (11.3) nominal ± 10%	4.7-10.7 [4] (15-35)	2.6 (8.4) nominal ± 10%	1.06 (240)	SP, CP, LS
Geoweb GW30V [2]	HDPE	Black, green, tan or special	460 (71.3)	100 (4)	287 (11.3) nominal ± 10%	4.7-10.7 [4] (15-35)	2.6 (8.4) nominal ± 10%	1.42 (320)	SP, CP, LS
Geoweb GW30V [2]	HDPE	Black, green, tan or special	460 (71.3)	150 (6)	287 (11.3) nominal ± 10%	4.7-10.7 [4] (15-35)	2.6 (8.4) nominal ± 10%	2.13 (480)	SP, CP, LS
Geoweb GW30V [2]	HDPE	Black, green, tan or special	460 (71.3)	200 (8)	287 (11.3) nominal ± 10%	4.7-10.7 [4] (15-35)	2.6 (8.4) nominal ± 10%	2.84 (640)	SP, CP, LS
Geoweb GW30V [2]	HDPE	Black, green, tan or special	460 (71.3)	150 (6)	267 (10.5) nominal ± 10%	per design	2.6 (8.67) nominal ± 10%	2.13 (480)	ER
Geoweb GW40V [2]	HDPE	Black, green, tan or special	1206 (187.0)	75 (3)	475 (18.7) nominal ± 10%	7.7-17.8 [4] (25-58)	2.5 (8.3) nominal ± 10%	1.06 (240)	SP, CP
Geoweb GW40V [2]	HDPE	Black, green, tan or special	1206 (187.0)	100 (4)	475 (18.7) nominal ± 10%	7.7-17.8 [4] (25-58)	2.5 (8.3) nominal ± 10%	1.42 (320)	SP, CP
Geoweb GW40V [2]	HDPE	Black, green, tan or special	1206 (187.0)	150 (6)	475 (18.7) nominal ± 10%	7.7-17.8 [4] (25-58)	2.5 (8.3) nominal ± 10%	2.13 (480)	SP, CP
Geoweb GW40V [2]	HDPE	Black, green, tan or special	1206 (187.0)	200 (8)	475 (18.7) nominal ± 10%	7.7-17.8 [4] (25-58)	2.5 (8.3) nominal ± 10%	2.84 (640)	SP, CP

[1] Per U.S. Army Corps of Engineers Technical Report GL-86-19; Appendix A specifies 2000 N (450 lbf) for 200 mm (8 in) depth.
[2] Perforated or non-perforated
[3] Manufacturing Process ISO 9002 certified
[4] Five sections available covering full range of lengths
[5] Quality system ISO 9001:2000 certified
[6] Standard and big cell available on request
[7] CP = Channel protection
CL = Channel lining
EC = Erosion control
ER = Earth retention
LS = Load support
RW = Retaining walls
SP = Slope protection
ST = Stabilization

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Product Name	Polymer Type	Color	Dimensional Properties					Minimum Cell Seam Peel Strength kN (lb)	Manufacturer's Suggested Applications [7]
			Cell (expanded)			Geocell Section			
			Area cm^2 (in^2)	Depth mm (in)	Length mm (in)	Length m (ft)	Width m (ft)		
Strata Systems Inc., dba StrataWeb | www.geogrid.com									
StrataWeb 356	HDPE	Black or special	289 (44)	75 (3), 100 (4), 150 (6), 200 (8)	224 (9)	6.5 (21)	2.6 (8.4)	1.07 (240), 1.42 (320), 2.13 (480), 2.84 (640)	All
StrataWeb 445	HDPE	Black or special	460 (71)	75 (3), 100 (4), 150 (6), 200 (8)	287 (11)	8.4 (27)	2.6 (8.4)	1.07 (240), 1.42 (320), 2.13 (480), 2.84 (640)	All
StrataWeb 712	HDPE	Black or special	1206 (187)	75 (3), 100 (4), 150 (6), 200 (8)	475 (19)	13.7 (45)	2.6 (8.4)	1.07 (240), 1.42 (320), 2.13 (480), 2.84 (640)	All
TechFab India | www.techfabindia.com									
TECHCELL TC356	HDPE blend	Black	289 (44.8)	150 (5.9)	224 (8.80)	6.5 (21.33)	2.59 (8.5)	2.13 (480)✧	Road ways, Railways, Steep soil reinforcement, Reservoirs, Channel protection, Land fill areas, Slope erosion control
✧EN ISO 13426:1:Method - B									
Typar Geosynthetics | www.typargeosynthetics.com									
Typar Geocells DC2	PP	Tan	2918.6 (452.4)	500 (20)	609.6 (24)	5.0 (16.4)	1.37 (4.5)	2 (400)	All
Typar Geocells DC3	PP	Tan	2918.6 (452.4)	500 (20)	609.6 (24)	5.0 (16.4)	1.6 (5.3)	2 (400)	All
Typar Geocells DC4	PP	Tan	2918.6 (452.4)	501 (20)	609.6 (24)	5.0 (16.4)	2.5 (8.0)	3 (400)	All
Typar Geocells GS 250/150	PP-PE	Dark grey	795 (123)	150 (6)	295 (11.6)	5.0 (16.4)	7.0 (23)	10 (2248)	All
Typar Geocells GS 250/100	PP-PE	Dark grey	795 (123)	100 (4)	295 (11.6)	5.0 (16.4)	7.0 (23)	10 (2248)	All
Typar Geocells GS 350/150	PP-PE	Dark grey	1503 (233)	150 (6)	415 (16.3)	5.0 (16.4)	7.0 (23)	10 (2248)	All
Typar Geocells GS 350/100	PP-PE	Dark grey	1503 (233)	100 (4)	415 (16.3)	5.0 (16.4)	7.0 (23)	10 (2248)	All
Typar Geocells GS 220/200	PP-PE	Dark grey	700 (109)	200 (8)	275 (10.8)	6.0 (19.7)	3.0 (9.9)	10 (2248)	All

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