



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).

GMA
1801 County Road B West, Suite 100
Roseville, MN 55113-4052 USA
+1 651 225 6981
fax +1 651 631 9334
fcchuck@ifai.com
www.GMAnow.com

PUBLISHER'S NOTE

Geosynthetics magazine compiled all information included in the 2022 *Geosynthetics 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 2022 *Geosynthetics 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.

Geocecell products are three-dimensional, expandable panels made from high-density polyethylene (HDPE), polyester or another polymeric 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 were asked to sign 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), 150 (6), 200 (8)	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), 150 (6), 200 (8)	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), 150 (6), 200 (8)	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	HDPE	Black, tan, green or custom	289 (44.8)	75, 100, 150, 200 (3, 4, 6, 8)	224 (8.8)	6.52 (21.4) ⁶	2.56 (8.4)	1.065, 1.42, 2.13, 2.84 (240, 320, 480, 640)	All
TerraCell 175	HDPE	Black, tan, green or custom	460 (71.3)	75, 100, 150, 200 (3, 4, 6, 8)	287(11.3)	8.35(27.4) ⁶	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.
Industrial Fabrics Inc. www.ind-fab.com									
BaseLok GeoCell GC20	HDPE	Black, green, tan or special	289 (44.8)	75 (3), 100(4), 125 (5), 150 (6), 200 (8)	224 (8.8)	6.52 (21.4)	2.56 (8.4) 5.44 (17.85)	1065 (240), 1.42 (320), 1.775 (400), 2.13 (480), 2.84 (640)	All
BaseLok GeoCell GC30	HDPE	Black, green, tan or special	460 (71.3)	75 (3), 100(4), 125 (5), 150 (6), 200 (8)	287 (11.3)	8.35 (27.4)	2.56 (8.4) 5.44 (17.85)	1065 (240), 1.42 (320), 1.775 (400), 2.13 (480), 2.84 (640)	All
BaseLok GeoCell GC40	HDPE	Black, green, tan or special	1206 (187)	75 (3), 100(4), 125 (5), 150 (6), 200 (8)	475 (18.7)	13.72 (45)	2.56 (8.4) 5.64 (18.5)	1065 (240), 1.42 (320), 1.775 (400), 2.13 (480), 2.84 (640)	All

[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

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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			
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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%	per design	2.5 (8.3) nominal ± 10%	2.13 (480)	ER
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
Omniweb OW30V	HDPE	Black	478 (74.1)	150 (6)	"287 (11.3) nominal ± 10%"	9.1 (29.9)	5 (16.5) nominal ± 10%	2.13 (480)	LS

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			Cell (expanded)			Geocell Section			
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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)	259 (10.2)	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
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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