



GEOCELLS

PRODUCT DATA

FOR MORE INFORMATION

Information on the geocell specification charts has been provided 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

All information included in this Specifier's Guide was compiled from information submitted by firms in the geosynthetics industry. Specifications were submitted voluntarily and their 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 Specifier's Guide is intended as a guide, and *Geosynthetics* and IFAI encourage readers to contact the companies listed for further information.

Geocells are engineered for protection and stabilization applications. They are often used to help improve the performance of standard construction materials and erosion-control treatments.

Geoce ll 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
- multi-layered 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)		
Fiberweb Geosynthetics www.fiberweb.com/geosynthetics/									
Typar Geocells DT1	PP	Tan	2918.6 (452.4)	500 (20)	609.6 (24)	4.9 (16.2)	0.61 (2.0)	2 (400)	All
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)	500 (20)	609.6 (24)	5.0 (16.4)	2.2 (7.3)	2 (400)	All
Typar Geocells GS E250	PP-PE	Dark Grey	795 (123)	150 (6)	300 (11.81)	5.0 (16.4)	7.0 (23)	10 (2248)	All
Typar Geocells GS E350	PP-PE	Dark Grey	1503 (233)	150 (6)	414 (16.30)	5.0 (16.4)	7.0 (23)	10 (2248)	All
Geo Products LLC dba Envirogrid www.geoproducts.org									
EGA20 [2]	HDPE	black, green, tan or special	289 (44.8)	200 (8)	224 (8.8)	6.52 (21.4)	2.56 (8.4)	2.84 (640)	All
EGA20 [2]	HDPE	black, green, tan or special	289 (44.8)	150 (6)	224 (8.8)	6.52 (21.4)	2.56 (8.4)	2.13 (480)	All
EGA20 [2]	HDPE	black, green, tan or special	289 (44.8)	100 (4)	224 (8.8)	6.52 (21.4)	2.56 (8.4)	1.42 (320)	All
EGA20 [2]	HDPE	black, green, tan or special	289 (44.8)	75 (3)	224 (8.8)	6.52 (21.4)	2.56 (8.4)	1.065 (240)	All
EGA30 [2]	HDPE	black, green, tan or special	460 (71.3)	200 (8)	287 (11.3)	8.35 (27.4)	2.56 (8.4)	2.84 (640)	All
EGA30 [2]	HDPE	black, green, tan or special	460 (71.3)	150 (6)	287 (11.3)	8.35 (27.4)	2.56 (8.4)	2.13 (480)	All
EGA30 [2]	HDPE	black, green, tan or special	460 (71.3)	100 (4)	287 (11.3)	8.35 (27.4)	2.56 (8.4)	1.42 (320)	All
EGA30 [2]	HDPE	black, green, tan or special	460 (71.3)	75 (3)	287 (11.3)	8.35 (27.4)	2.56 (8.4)	1.065 (240)	All
EGA40 [2]	HDPE	black, green, tan or special	1206 (187)	200 (8)	475 (18.7)	13.72 (45)	2.56 (8.4)	2.84 (640)	All
EGA40 [2]	HDPE	black, green, tan or special	1206 (187)	150 (6)	475 (18.7)	13.72 (45)	2.56 (8.4)	2.13 (480)	All
EGA40 [2]	HDPE	black, green, tan or special	1206 (187)	100 (4)	475 (18.7)	13.72 (45)	2.56 (8.4)	1.42 (320)	All
EGA40 [2]	HDPE	black, green, tan or special	1206 (187)	75 (3)	475 (18.7)	13.72 (45)	2.56 (8.4)	1.065 (240)	All
EnviroGrid Paver	HDPE	black, green, tan or special	92.9 (14.4)	50 (2.0)	127 (5)	3.68 (12.08)	1.46 (4.8)	710 (160)	All
EnviroGrid Paver	HDPE	black, green, tan or special	92.9 (14.4)	75 (3.0)	127 (5)	3.68 (12.08)	1.46 (4.8)	1065 (240)	All
EnviroGrid Paver	HDPE	black, green, tan or special	92.9 (14.4)	100 (4.0)	127 (5)	3.68 (12.08)	1.46 (4.8)	1420 (320)	All
EnviroGrid Paver	HDPE	black, green, tan or special	92.9 (14.4)	125 (5.0)	127 (5)	3.68 (12.08)	1.46 (4.8)	1775 (400)	All
Huikwang Corp. www.huitex.com									
Huitex GC,GT [2]	HDPE	black	480 (74.5) 1920 (298) 150 (6) 200 (8)	50 (2) 75 (3) 100 (4)	204 (8) 408 (16)	6.1 (20) 12.2 (40)	2.44 (8)	0.5 (112) 0.75 (168) 1.0 (225) 1.5 (337) 2.0 (450)	SP, CP, ER, LS, EC, ST.

[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 LS = Load support
 CL = Channel lining RW = Retaining walls
 EC = Erosion control SP = Slope protection
 ER = Earth retention ST = Stabilization

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 Products Co. - 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
G3-Cell G3V20 [2]	recycled HDPE	black	289 (44.8)	100 (4), 150 (6), 200 (8)	224 (8.8) nominal ± 10%	5.9-7.1 (19.4-23.3)	2.6 (8.5) nominal ± 10%	1.06 (240) - 1.84 (640) [Ave]	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
G3-Cell G3V30 [2]	recycled HDPE	black	460 (71.3)	100 (4), 150 (6)	287 (11.3) nominal ± 10%	4.7-10.7 (15.4-35.1)	2.6 (8.4) nominal ± 10%	1.06 (240) - 1.84 (640) [Ave]	SP, CP, LS
Geoweb GW30V [2]	HDPE	black, green, tan or special	460 (71.3)	150 (6)	267 (10.5) nominal ± 10%	4.7-10.7 (15.4-35.1)	2.6 (8.4) 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
G3-Cell G3V40 [2]	recycled HDPE	black	1206 (187.0)	75 (3), 100 (4)	475 (18.7) nominal ± 10%	7.7-17.8 (25.4-58.2)	2.5 (8.3) nominal ± 10%	1.06 (240) - 1.84 (640) [Ave]	SP, CP
Strata Systems Inc. dba StrataWeb www.geogrid.com									
SCC20	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), 2.13 (480), 2.84 (640)	All
SCC30	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), 2.13 (480), 2.84 (640)	All
SCC40	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), 2.13 (480), 2.84 (640)	All

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