


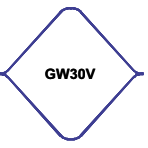
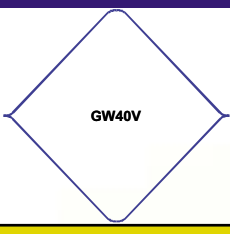


# Perforated V-Series Geoweb® System

## Performance & Material Specification Summary

Property		Value			Test Method	
<b>Base Material</b>	<b>Material Composition</b>	Polymer – Polyethylene with density of 0.935 – 0.965 g/cm <sup>3</sup> (58.4 - 60.2 lb/ft <sup>3</sup> )			ASTM D 1505	
	<b>Color</b>	Black - from Carbon Black	Tan, Green, Other colors with no heavy metal content		N/A	
	<b>Stabilizer</b>	Carbon black content 1.5% - 2% by weight	Hindered amine light stabilizer (HALS) 1.0% by weight of carrier		N/A	
	<b>Minimum ESCR</b>	3000 hr			ASTM D 1693	
<b>Strip Properties</b>	<b>Sheet Thickness</b>	1.27 mm -5% +10% (50 mil -5% +10%)			ASTM D 5199	
	<b>Surface Treatment</b>	<b>Performance:</b> The polyethylene strips shall be textured and perforated such that the peak friction angle between the surface of the textured / perforated plastic and a #40 silica sand at 100% relative density shall be no less than 85% of the peak friction angle of the silica sand in isolation when tested by the direct shear method per ASTM D 5321.		<b>Material:</b> The polyethylene strips shall be textured with a multitude of rhomboidal (diamond shape) indentations. The rhomboidal indentations shall have a surface density of 22 – 31 per cm <sup>2</sup> (140 – 200 per in <sup>2</sup> ). In addition, the strips shall be perforated with horizontal rows of 10 mm (0.4 in) diameter holes. Perforations within each row shall be 19 mm (0.75 in) on-center. Horizontal rows shall be staggered and separated 12 mm (0.50 in) relative to the hole centers. The edge of strip to the nearest edge of perforation shall be 8 mm (0.3 in) minimum and the centerline of the weld to the nearest edge of perforation shall be 18 mm (0.7 in) minimum.		
<b>Cell &amp; Seam Properties</b>	<b>Cell Details</b>	<b>Percent Cell Wall Open Area</b>	<b>Nominal Dimensions ±10%</b>		<b>Density per m<sup>2</sup> (yd<sup>2</sup>)</b>	<b>Nominal Area ±1%</b>
			<b>Length</b>	<b>Width</b>		
	<b>GW20V</b>	22.1 ± 0.5%	224 mm (8.8 in)	259 mm (10.2 in)	34.6 m <sup>2</sup> (28.9 yd <sup>2</sup> )	289 cm <sup>2</sup> (44.8 in <sup>2</sup> )
	<b>GW30V</b>	17.2 ± 0.5%	287 mm (11.3 in)	320 mm (12.6 in)	21.7 m <sup>2</sup> (18.2 yd <sup>2</sup> )	460 cm <sup>2</sup> (71.3 in <sup>2</sup> )
	<b>GW40V</b>	20.75 ± 0.5%	475 mm (18.7 in)	508 mm (20.0 in)	8.3 m <sup>2</sup> (6.9 yd <sup>2</sup> )	1,206 cm <sup>2</sup> (187.0 in <sup>2</sup> )
	<b>Short-term Seam Peel Strength</b>	<b>Cell Depth</b>		<b>Minimum Certified Cell Seam Strength</b>		
		75 mm (3 in)		1060 N (240 lbf)		
		100 mm (4 in)		1420 N (320 lbf)		
		150 mm (6 in)		2130 N (480 lbf)		
	<b>Long-term Seam Peel Strength</b>	200 mm (8 in)		2840 N (640 lbf)		
Long term seam peel-strength test shall be performed on all resin or pre-manufactured sheet or strips. A 100 mm (4.0 in) wide seam sample shall support a 72.5 kg (160 lb) load for a period of 168 hours (7 days) minimum in a temperature-controlled environment undergoing a temperature change on a 1-hour cycle from ambient room to 54°C (130°F). Ambient room temperature is per ASTM E 41.						
<b>Section Properties</b>	<b>Section Dimension</b>	<b>Section Width</b>	<b>Section Length Range (Cells Long: 18, 21, 25, 29, 34)</b>			
		<b>Variable</b>	<b>Minimum</b>	<b>Maximum</b>		
	<b>GW20V</b>	2.3 m (7.7 ft) to 2.8 m (9.2 ft)	3.7 m (12.0 ft)	8.3 m (27.3 ft)		
	<b>GW30V</b>		4.7 m (15.4 ft)	10.7 m (35.1 ft)		
	<b>GW40V</b>		7.7 m (25.4 ft)	17.8 m (58.2 ft)		

## The Geoweb® Cell Dimensions

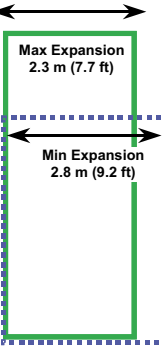
Relative Size <sup>1</sup>			
Name	GW20V (small cell)	GW30V (mid cell)	GW40V (large cell)
Nominal Length x Width <sup>2</sup>	224 x 259 mm (8.8 x 10.2 in)	287 x 320 mm (11.3 x 12.6 in)	475 x 508 mm (18.7 x 20.0 in)
Nominal Area <sup>3</sup>	289 cm <sup>2</sup> (44.8 in <sup>2</sup> )	460 cm <sup>2</sup> (71.3 in <sup>2</sup> )	1206 cm <sup>2</sup> (187.0 in <sup>2</sup> )
Cells per m <sup>2</sup> (yd <sup>2</sup> )	34.6 (28.9)	21.7 (18.2)	8.3 (6.9)
Nominal Depths	75 mm (3 in), 100 mm (4 in), 150 mm (6 in), and 200 mm (8 in) for all cells		

1 All details and dimensions are nominal and subject to manufacturing tolerances.

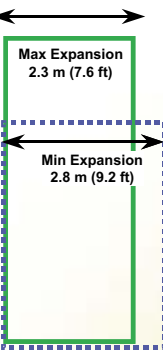
2 Cell length and width will vary approximately  $\pm 10\%$  through the recommended expansion range.

3 Cell area will vary only  $\pm 1\%$  through the recommended section expansion range.

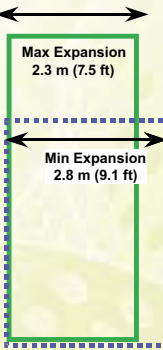
### The GW20V Section Dimensions

	Cells Long	Length Minimum Expansion	Length Maximum Expansion	Nominal Area
	18	3.7 m (12.0 ft)	4.4 m (14.5 ft)	10.4 m <sup>2</sup> (112 ft <sup>2</sup> )
21	4.3 m (14.0 ft)	5.1 m (16.9 ft)	12.1 m <sup>2</sup> (131 ft <sup>2</sup> )	
25	5.1 m (16.7 ft)	6.1 m (20.1 ft)	14.5 m <sup>2</sup> (156 ft <sup>2</sup> )	
29	5.9 m (19.4 ft)	7.1 m (23.3 ft)	16.8 m <sup>2</sup> (181 ft <sup>2</sup> )	
34	6.9 m (22.7 ft)	8.3 m (27.3 ft)	19.7 m <sup>2</sup> (212 ft <sup>2</sup> )	

### The GW30V Section Dimensions

	Cells Long	Length Minimum Expansion	Length Maximum Expansion	Nominal Area
	18	4.7 m (15.4 ft)	5.7 m (18.6 ft)	13.3 m <sup>2</sup> (143 ft <sup>2</sup> )
21	5.5 m (18.0 ft)	6.6 m (21.7 ft)	15.5 m <sup>2</sup> (167 ft <sup>2</sup> )	
25	6.5 m (21.4 ft)	7.9 m (25.8 ft)	18.4 m <sup>2</sup> (198 ft <sup>2</sup> )	
29	7.6 m (24.8 ft)	9.1 m (30.0 ft)	21.4 m <sup>2</sup> (230 ft <sup>2</sup> )	
34	8.9 m (29.1 ft)	10.7 m (35.1 ft)	25.0 m <sup>2</sup> (270 ft <sup>2</sup> )	

### The GW40V Section Dimensions

	Cells Long	Length Minimum Expansion	Length Maximum Expansion	Nominal Area
	18	7.7 m (25.4 ft)	9.4 m (30.8 ft)	21.7 m <sup>2</sup> (234 ft <sup>2</sup> )
21	9.0 m (29.6 ft)	11.0 m (36.0 ft)	25.3 m <sup>2</sup> (273 ft <sup>2</sup> )	
25	10.7 m (35.2 ft)	13.1 m (42.8 ft)	30.2 m <sup>2</sup> (325 ft <sup>2</sup> )	
29	12.5 m (40.9 ft)	15.1 m (49.7 ft)	35.0 m <sup>2</sup> (377 ft <sup>2</sup> )	
34	14.6 m (47.9 ft)	17.8 m (58.2 ft)	41.0 m <sup>2</sup> (441 ft <sup>2</sup> )	