





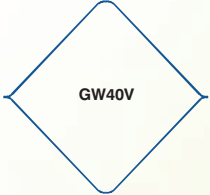
# Presto®

## GEOSYSTEMS

### Perforated Geoweb® System Performance & Material Specification Summary

Property		Value			Test Method	
Base Material	Material Composition	Polymer – Polyethylene with density of 58.4 - 60.2 lb/ft <sup>3</sup> (0.935 – 0.965 g/cm <sup>3</sup> )			ASTM D 1505	
	Color	Black - from Carbon Black	Tan, Green, Other colors with no heavy metal content		N/A	
	Stabilizer	Carbon black content 1.5% - 2% by weight	Hindered amine light stabilizer (HALS) 1.0% by weight of carrier		N/A	
	Minimum ESCR	5000 hr			ASTM D 1693	
	Sheet Thickness	50 mil -5% +10%(1.27 mm -5% +10%)			ASTM D 5199	
Strip Properties	Surface Treatment	<p><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 #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.</p>		<p><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 140 – 200 per in<sup>2</sup> (22 – 31 per cm<sup>2</sup>). In addition, the strips shall be perforated with horizontal rows of 0.4 in (10 mm) diameter holes. Perforations within each row shall be 0.75 in (19 mm) on-center. Horizontal rows shall be staggered and separated 0.50 in (12 mm) relative to the hole centers. The edge of strip to the nearest edge of perforation shall be 0.3 in (8 mm) minimum and the centerline of the weld to the nearest edge of perforation shall be 0.7 in (18 mm) minimum. A slot with a dimension of 3/8 in x 1 3/8 in (10 mm x 35 mm) is standard in the center of the non-perforated areas and at the center of each weld.</p>		
		Cell Details	Percent Cell Wall Open Area	Nominal Dimensions ±10%		Density per yd <sup>2</sup> (m <sup>2</sup> )
			Length	Width		
	GW20V	17.4% ± 1.0%	8.8 in (224 mm)	10.2 in (259 mm)	28.9 yd <sup>2</sup> (34.6 m <sup>2</sup> )	44.8 in <sup>2</sup> (289 cm <sup>2</sup> )
	GW30V	13.85% ± 0.5%	11.3 in (287 mm)	12.6 in (320 mm)	18.2 yd <sup>2</sup> (21.7 m <sup>2</sup> )	71.3 in <sup>2</sup> (460 cm <sup>2</sup> )
	GW40V	17.2% ± 1.0%	18.7 in (475 mm)	20.0 in (508 mm)	6.9 yd <sup>2</sup> (8.3 m <sup>2</sup> )	187.0 in <sup>2</sup> (1,206 cm <sup>2</sup> )
Cell & Seam Properties	Short-term Seam Peel Strength	Cell Depth		Minimum Certified Cell Seam Strength		
		3 in (75 mm)		240 lbf (1060 N)		
		4 in (100 mm)		320 lbf (1420 N)		
		6 in (150 mm)		480 lbf (2130 N)		
	8 in (200 mm)		640 lbf (2840 N)			
Long-term Seam Peel Strength	Long term seam peel-strength test shall be performed on all resin or pre-manufactured sheet or strips. A 4.0 in (100 mm) wide seam sample shall support a 160 lb (72.5 kg) 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 130°F (54°C). Ambient room temperature is per ASTM E 41.					
10,000 hour Seam Peel Strength Certification	Presto shall provide data showing that the high-density polyethylene resin used to produce the Geoweb sections has been tested using an appropriate number of seam samples and varying loads to generate data indicating that the seam peel strength shall survive a loading of at least 209 lbf (95 kg) for a minimum of 10,000 hours.					
Section Properties	Section Dimension	Section Width		Section Length Range (Cells Long: 18, 21, 25, 29, 34)		
		Variable		Minimum		Maximum
	GW20V	7.7 ft (2.3 m) to 9.2 ft (2.8 m)		12.0 ft (3.7 m)		27.3 ft (8.3 m)
	GW30V			15.4 ft (4.7 m)		35.1 ft (10.7 m)
GW40V	25.4 ft (7.7 m)			58.2 ft (17.8 m)		

# The Geoweb® Cell Dimensions

Relative Size <sup>1</sup>				
Name	GW20V (small cell)	GW30V (mid cell) For all other Applications      For Earth Retention <sup>4</sup>		GW40V (large cell)
Nominal Length x Width <sup>2</sup>	8.8 x 10.2 in (224 x 259 mm)	11.3 x 12.6 in (287 x 320 mm)	10.5 x 13.0 in (267 x 330 mm)	18.7 x 20.0 in (475 x 508 mm)
Nominal Area <sup>3</sup>	44.8 in <sup>2</sup> (289 cm <sup>2</sup> )	71.3 in <sup>2</sup> (460 cm <sup>2</sup> )	68.3 in <sup>2</sup> (440 cm <sup>2</sup> )	187.0 in <sup>2</sup> (1206 cm <sup>2</sup> )
Cells per yd <sup>2</sup> (m <sup>2</sup> )	28.9 (34.6)	18.2 (21.7)	NA	6.9 (8.3)
Nominal Depths	3 in (75 mm), 4 in (100 mm), 6 in (150 mm), and 8 in (200 mm) for all cells			

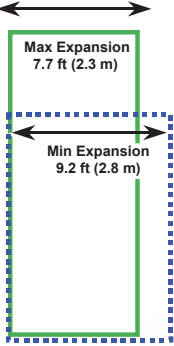
1 All details and dimensions are nominal and subject to manufacturing tolerances.

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

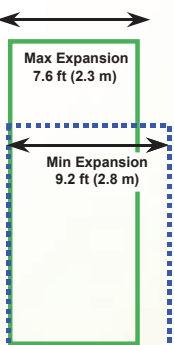
3 Cell area will vary only ±1% through the recommended section expansion range.

4 Cell dimensions for Earth Retention sections are fixed and NOT variable or nominal.

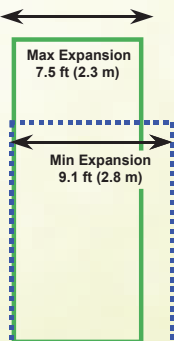
## The GW20V Section Dimensions

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

## The GW30V Section Dimensions

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

## The GW40V Section Dimensions

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