



Perforated V-Series Geoweb® System Performance & Material Specification Summary
GW20V - 100 mm (4 in) Depth

Property	Value			Test Method		
Base Material	Material Composition	Polymer – Polyethylene with density of 0.935 – 0.965 g/cm ³ (58.4 - 60.2 lb/ft ³)		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	3000 hr		ASTM D 1693		
Strip Properties	Sheet Thickness	1.27 mm -5% +10% (50 mil -5% +10%)		ASTM D 5199		
	Surface Treatment	<p>Performance: 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. The quantity of perforations shall remove 22.1% ± 0.5% of the cell wall area.</p>	<p>Material: 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 cm² (140 – 200 per in²). 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.</p>			
Cell & Seam Properties	Cell Details	Depth	Nominal Dimensions ±10%		Density per m² (yd²)	Nominal Area ±1%
			Length	Width		
	GW20V	100 mm (4 in)	224 mm (8.8 in)	259 mm (10.2 in)	36.4 (28.9)	289 cm ² (44.8 in ²)
	Short-term Seam Peel Strength	Cell Depth		Minimum Certified Cell Seam Strength		
	75 mm (3 in)		1420 N (320 lbf)			
Long-term Seam Peel Strength	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.					
Section Properties	Section Dimension	Section Width		Section Length Range (Cells Long: 18, 21, 25, 29, 34)		
		Variable		Minimum	Maximum	
	GW20V	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)
Certifications & Warranties	Geoweb® Material	Geoweb® sections are manufactured under a quality management system that is ISO-9001:2000 certified. For additional certification and warranty information, refer to the Geoweb® Cellular Confinement System V Series Material Specification .				