

# GSE PermaNet 7.6 mm Geocomposite

METRIC

GSE PermaNet 7.6 mm geocomposite is manufactured with a GSE PermaNet geonet heat-bonded on one or both sides with a GSE nonwoven needle-punched geotextile. The geotextile is available in mass per unit area range of 200 g/m<sup>2</sup> to 540 g/m<sup>2</sup>. The round strand, creep resistant structure of this product ensures continuous flow performance over a broad range of conditions and long durations and is ideal for very high compressive stress applications.

## Product Specifications

Tested Property	Test Method	Frequency	Minimum Average Roll Value <sup>(1)</sup>		
<b>Geocomposite</b>			<b>200 g/m<sup>2</sup></b>	<b>270 g/m<sup>2</sup></b>	<b>335 g/m<sup>2</sup></b>
Transmissivity <sup>(1)</sup> , m <sup>2</sup> /sec Double-Sided Composite Single-Sided Composite	ASTM D 4716	1/50,000 m <sup>2</sup>	1 x 10 <sup>-3</sup> 1.3 x 10 <sup>-3</sup>	1 x 10 <sup>-3</sup> 1.3 x 10 <sup>-3</sup>	1 x 10 <sup>-3</sup> 1.3 x 10 <sup>-3</sup>
Ply Adhesion, g/cm	ASTM D 7005	1/4,600 m <sup>2</sup>	178	178	178
<b>Geonet Core - GSE PermaNet<sup>(1,3)</sup></b>					
Geonet Core Thickness, mm	ASTM D 5199	1/4,600 m <sup>2</sup>	7.6	7.6	7.6
Transmissivity <sup>(1)</sup> , m <sup>2</sup> /sec	ASTM D 4716	1/50,000 m <sup>2</sup>	5 x 10 <sup>-3</sup>	5 x 10 <sup>-3</sup>	5 x 10 <sup>-3</sup>
Compressive Strength, kPa	ASTM D 6364	1/50,000 m <sup>2</sup>	2394	2394	2394
Creep Reduction Factor	ASTM D 7361	per formulation	1.3 @ 957 kPa	1.3 @ 957 kPa	1.3 @ 957 kPa
Density, g/cm <sup>3</sup>	ASTM D 1505	1/4,600 m <sup>2</sup>	0.94	0.94	0.94
Tensile Strength (MD), N/mm	ASTM D 7179	1/4,600 m <sup>2</sup>	17.5	17.5	17.5
Carbon Black Content, %	ASTM D 4218	1/4,600 m <sup>2</sup>	2.0	2.0	2.0
<b>Geotextile<sup>(1,3)</sup></b>					
Mass per Unit Area, g/m <sup>2</sup>	ASTM D 5261	1/8,300 m <sup>2</sup>	200	270	335
Grab Tensile Strength, N	ASTM D 4632	1/8,300 m <sup>2</sup>	710	975	1,155
Grab Elongation	ASTM D 4632	1/8,300 m <sup>2</sup>	50%	50%	50%
CBR Puncture Strength, N	ASTM D 6241	1/50,000 m <sup>2</sup>	1,936	2,557	3,225
Trapezoidal Tear Strength, N	ASTM D 4533	1/8,300 m <sup>2</sup>	290	395	445
AOS, US sieve (mm)	ASTM D 4751	1/50,000 m <sup>2</sup>	0.212	0.180	0.150
Permittivity, (sec <sup>-1</sup> )	ASTM D 4491	1/50,000 m <sup>2</sup>	1.5	1.3	1.0
Water Flow Rate, lpm/m <sup>2</sup>	ASTM D 4491	1/50,000 m <sup>2</sup>	4,480	3,865	3,050
UV Resistance, % Retained	ASTM D 4355 (after 500 hours)	per formulation	70	70	70
<b>NOMINAL ROLL DIMENSIONS<sup>(4)</sup></b>					
Roll Width, m			4.5	4.5	4.5
Roll Length, m	Double-Sided Composite Single-Sided Composite		57.9 61.0	54.9 61.0	45.7 57.9
Roll Area, m <sup>2</sup>	Double-Sided Composite Single-Sided Composite		265 279	251 279	209 265

NOTES:

- <sup>(1)</sup>This is an index transmissivity value measured at stress = 1,200 kPa; gradient = 0.1; time = 15 minutes; boundary conditions = between plates. Contact GSE for performance transmissivity value for use in design.
- <sup>(2)</sup>All geotextile properties are minimum average roll values except AOS (in mm) which is a maximum average roll value and UV resistance which is a typical value.
- <sup>(3)</sup>Component properties prior to lamination.
- <sup>(4)</sup>Roll widths and lengths have a tolerance of ±1%.

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

**[ DURABILITY RUNS DEEP ]** For more information on this product and others, please visit us at [GSEworld.com](http://GSEworld.com), call 800.435.2008 or contact your local sales office.



**AT THE CORE:**  
A very high compressive strength geocomposite for a broad range of conditions and long durations.

