

# GSE ProFlex

GSE ProFlex is a propylene/ethylene copolymer geomembrane produced from a resin formulation designed to provide quality geomembrane with excellent flexibility, and improved elasticity and resistance to puncture. These properties assure maximum multi-axial elongation to accommodate differential settlement. GSE ProFlex is ideal for most geomembrane applications and major benefits to installation are provided by lower coefficient of thermal expansion and a wide temperature-welding window.



## AT THE CORE:

Geomembrane with excellent flexibility, improved elasticity and resistance to puncture assures maximum multi-axial elongation.

## Product Specifications

Tested Property	Test Method	Frequency	Minimum Average Value			
			30 mil	40 mil	60 mil	80 mil
Thickness, mil Lowest individual reading	ASTM D 5199	4,000 lb	30 27	40 36	60 54	80 72
Density, g/cm <sup>3</sup>	ASTM D 1505	15,000 lb	0.87	0.87	0.87	0.87
Tensile Properties (each direction) Strength at Break, lb/in Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 20 in/min G.L. 2 in	15,000 lb	68 900	97 900	142 900	200 900
Tear Resistance, lb	ASTM D 1004	15,000 lb	10	12	20	27
Puncture Resistance, lb	ASTM D 4833	15,000 lb	25	30	45	65
Reference Property	Test Method	Frequency	Nominal Value			
Carbon Black Content, % (Range)	ASTM D 1603 <sup>1</sup> /4218		3.0	3.0	3.0	3.0
Carbon Black Dispersion	ASTM D 5596		Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>
Multi-axial Strain, %	ASTM D 5617		> 120	> 120	> 120	> 120
Low Temperature Brittleness, °C	ASTM D 2136 <sup>(2)</sup>		< -40	< -40	< -40	< -40
TYPICAL ROLL DIMENSIONS						
Roll Length <sup>(3)</sup> , ft			1,120	870	560	430
Roll Width <sup>(3)</sup> , ft			22.5	22.5	22.5	22.5
Roll Area, ft <sup>2</sup>			25,200	19,575	12,600	9,675

NOTES:

- <sup>(1)</sup>Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
- <sup>(2)</sup>Using 32 mm mandrel 4 hours.
- <sup>(3)</sup>Roll lengths and widths have a tolerance of ± 1%.
- GSE ProFlex is available in rolls weighing approximately 4,000 lb.
- \*Modified.

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.

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GSE ProFlex is a propylene/ethylene copolymer geomembrane produced from a resin formulation designed to provide quality geomembrane with excellent flexibility, and improved elasticity and resistance to puncture. These properties assure maximum multi-axial elongation to accommodate differential settlement. GSE ProFlex is ideal for most geomembrane applications and major benefits to installation are provided by lower coefficient of thermal expansion and a wide temperature-welding window.

## Product Specifications (Metric)

Tested Property	Test Method	Frequency	Minimum Average Value			
			0.75 mm	1.0 mm	1.5 mm	2.0 mm
Thickness, (minimum average) mil Lowest individual reading (-10%)	ASTM D 5199	2,000 kg	0.75 0.68	1.00 0.90	1.50 1.35	2.00 1.80
Density, g/cm <sup>3</sup>	ASTM D 1505	7,500 kg	0.87	0.87	0.87	0.87
Tensile Properties (each direction) Strength at Break, N/mm Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 20 in/min G.L. 2 in	7,500 kg	12 900	17 900	25 900	35 900
Tear Resistance, N	ASTM D 1004	7,500 kg	45	55	90	120
Puncture Resistance, N	ASTM D 4833	7,500 kg	120	150	200	300
Reference Property	Test Method	Frequency	Nominal Value			
Carbon Black Content, % (Range)	ASTM D 1603*/4218		3.0	3.0	3.0	3.0
Carbon Black Dispersion	ASTM D 5596		Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>
Multi-axial Strain, %	ASTM D 5617		> 120	> 120	> 120	> 120
Low Temperature Brittleness, °C	ASTM D 2136 <sup>(2)</sup>		< -40	< -40	< -40	< -40
TYPICAL ROLL DIMENSIONS						
Roll Length <sup>(3)</sup> , m			341	265	171	131
Roll Width <sup>(3)</sup> , m			6.9	6.9	6.9	6.9
Roll Area, m			2,341	1,819	1,171	899

NOTES:

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- <sup>(2)</sup>Using 32mm mandrel 4 hours.
- <sup>(3)</sup>Roll lengths and widths have a tolerance of ± 1%.
- GSE ProFlex is available in rolls weighing approximately 1,769 kg.
- \*Modified.



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