

# GSE UltraFlex FrictionFlex Geomembrane (Single-Sided)



**AT THE CORE:**  
A spray-on version of GSE UltraFlex Geomembrane that allows for greater slopes since frictional characteristics are enhanced.

GSE UltraFlex FrictionFlex is a spray-on texture version of GSE UltraFlex. It is a linear low density polyethylene (LLDPE) geomembrane that is textured on one side using GSE's patented texturing process and manufactured with the highest quality resin specifically formulated for flexible geomembranes. This process is the only one that produces a textured material without significant reduction of any physical properties. The product allows project for greater slopes to be designed since frictional characteristics are enhanced.

## Product Specifications

These product specifications meet or exceed GRI GM17.

Tested Property	Test Method	Frequency	Minimum Average Value			
Thickness, (minimum average) mm (mil) Lowest individual reading, mm (mil)	ASTM D 5994	every roll	1.0 (40) 0.9 (36)	1.5 (60) 1.35 (54)	2.0 (80) 1.8 (72)	2.5 (100) 2.25 (90)
Density, g/cm <sup>3</sup>			0.92	0.92	0.92	0.92
Tensile Properties (each direction) Strength at Break, N/mm-width (lb/in) Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 2 ipm G.L. = 51 mm (2.0 in)	every 5th roll	25 (143) 700	40 (228) 700	53 (303) 700	66 (377) 700
Tear Resistance, N (lb)	ASTM D 1004	every 5th roll	100 (22)	150 (34)	200 (45)	250 (56)
Puncture Resistance, N (lb)	ASTM D 4833	every 5th roll	214 (48)	325 (73)	436 (98)	538 (121)
Carbon Black Content, %	ASTM D 1603 / D 4218	every 5th roll	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	every 5th roll	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>
Asperity Height	ASTM D 7466	every 2nd roll	Note <sup>(2)</sup>	Note <sup>(2)</sup>	Note <sup>(2)</sup>	Note <sup>(2)</sup>
Oxidative Induction Time, minutes	ASTM D 3895, 200° C; O <sub>2</sub> 1 atm	90,000 kg	>100	>100	>100	>100
<b>TYPICAL ROLL DIMENSIONS</b>						
Roll Length <sup>(3)</sup> , m (ft)			200 (656)	100 (328)	80 (262)	60 (197)
Roll Width <sup>(3)</sup> , m (ft)			7.0 (23)	7.0 (23)	7.0 (23)	7.0 (23)
Roll Area, m <sup>2</sup> (ft <sup>2</sup> )			1,400 (15,088)	700 (7,544)	560 (6,026)	420 (4,531)
40' Standard Container, roll			9	16	16	16

**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>0.25 mm average. 8 of 10 readings ≥0.18 mm. Lowest individual ≥0.13 mm.
- <sup>(3)</sup>Roll lengths and widths have a tolerance of ±1%.
- GSE UltraFlex FrictionFlex is provided in rolls weighing approximately 1,050 kg (2,315lb) each.
- All GSE geomembranes have dimensional stability of ±2% when tested with ASTM D 1204 and LTB of <-77° C when tested with ASTM D 746.

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 66.2.937.0091 or contact your local sales office.