

# UltraFlex Textured Geomembrane

UltraFlex Textured is a co-extruded textured linear low density polyethylene (LLDPE) geomembrane available on one or both sides. It is manufactured from the highest quality resin specifically formulated for flexible geomembranes. This product is used in applications that require increased frictional resistance, flexibility and elongation properties where differential or localized subgrade settlements may occur such as in a landfill closure application.

## Product Specifications

These product specifications meet GRI GM13

Tested Property	Test Method	Frequency	Minimum Average Value				
			0.75 mm	1.00 mm	1.50 mm	2.00 mm	2.50 mm
Thickness, (minimum average), mm Lowest individual reading	ASTM D 5994	every roll	0.750 0.675	1.00 0.90	1.50 1.35	2.00 1.80	2.50 2.25
Density, g/cm <sup>3</sup> , (min.)	ASTM D 1505	90,000 kg	0.940	0.940	0.940	0.940	0.940
Tensile Properties (each direction) Strength at Break, N/mm Strength at Yield, N/mm Elongation at Break, % Elongation at Yield, %	ASTM D 6693, Type IV Dumbbell, 50 mm/min  G.L. 50 mm G.L. 33 mm	9,000 kg	8 11 100 12	10 15 100 12	16 22 100 12	21 29 100 12	26 37 100 12
Tear Resistance, N	ASTM D 1004	20,000 kg	93	125	187	249	311
Puncture Resistance, N	ASTM D 4833	20,000 kg	200	267	400	534	667
Carbon Black Content, % (Range)	ASTM D 1603*/4218	9,000 kg	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	20,000 kg	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>	Note <sup>(1)</sup>
Asperity Height, mm	ASTM D 7466	second roll	0.40	0.45	0.45	0.45	0.45
Notch Constant Tensile Load <sup>(2)</sup> , hr	ASTM D 5397, Appendix	90,000 kg	300	300	300	300	300
Oxidative Induction Time, min	ASTM D 3895, 200°C; O <sub>2</sub> , 1 atm	90,000 kg	>100	>100	>100	>100	>100
<b>TYPICAL ROLL DIMENSIONS</b>							
Roll Length <sup>(3)</sup> , m	Double-Sided Textured	253	213	158	122	101	
	Single-Sided Textured	308	238	165	125	101	
Roll Width <sup>(3)</sup> , m		6.86	6.86	6.86	6.86	6.86	
Roll Area, m <sup>2</sup>	Double-Sided Textured	1,736	1,461	1,084	837	693	
	Single-Sided Textured	2,113	1,633	1,132	858	693	

### 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>NCTL for GSE HD Textured is conducted on representative smooth geomembrane samples.
- <sup>(3)</sup>Roll lengths and widths have a tolerance of ±1%.
- GSE HD Textured is available in rolls weighing approximately 1,800 kg.
- All GSE geomembranes have dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77° C when tested according to ASTM D 746.
- \*Modified.