

# High Performance GSE UltraFlex White Smooth Geomembrane



**AT THE CORE:**  
An LLDPE geomembrane with a UV stabilized upper white surface used in applications that require increased flexibility and elongation properties, as well as additional quality assurance.

High Performance GSE UltraFlex White Smooth is a co-extruded linear low density polyethylene (LLDPE) geomembrane specifically designed to be used in the most stringent applications. This product has a UV stabilized upper white surface that reflects light, improves damage detection, and reduces wrinkles and subgrade desiccation. It is designed for applications that require increased elasticity and multi-axial break resistance where differential or localized settlements may occur such as in landfill closures. This product contains only the finest raw materials to enable exceptional elasticity and excellent multi-axial break resistance. Included in this product is a custom additive package that has been engineered to enable extended geomembrane lifetime and improved resilience in elevated temperatures, hazardous waste containment, or a harsh chemical environment. In addition to a superior UV stabilization package, a well-dispersed premium grade of carbon black is utilized in the black layers to deliver superb UV resistance in exposed applications.

## Product Specifications

These product specifications exceed GRI GM17

Tested Property	Test Method	Frequency	Minimum Average Value			
			40 mil	60 mil	80 mil	100 mil
Thickness, mil Lowest individual reading	ASTM D 5199	every roll	40 36	60 54	80 72	100 90
Density, g/cm <sup>3</sup>	ASTM D 1505	200,000 lb	0.92	0.92	0.92	0.92
Tensile Properties (each direction) Strength at Break, lb/in-width Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 2 ipm G.L. 2.0 in	20,000 lb	170 900	240 900	320 900	380 900
Tear Resistance, lb	ASTM D 1004	45,000 lb	22	33	44	55
Puncture Resistance, lb	ASTM D 4833	45,000 lb	70	100	130	155
Multi-axial Break Resistance, %	ASTM D 5617	per formulation	90	90	90	90
Carbon Black Content <sup>(1)</sup> , % (Range)	ASTM D 1603*/4218	20,000 lb	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	Note <sup>(2)</sup>	Note <sup>(2)</sup>	Note <sup>(2)</sup>	Note <sup>(2)</sup>
Oxidative Induction Time, mins	ASTM D 3895, 200°C; O <sub>2</sub> , 1 atm	200,000 lb	>140	>140	>140	>140
High Pressure Oxidative Induction Time, mins	ASTM D 5885, 150°C; O <sub>2</sub> , 3.4 MPa	per formulation	>550	>550	>550	>550
Oven aging at 85°C High Pressure OIT (min. avg.) - % retained after 90 days	ASTM D 5721 ASTM D 5885	per formulation	80	80	80	80
UV Resistance High Pressure OIT (min. avg.) - % retained after 1,600 hours	GM 11 ASTM D 5885	per formulation	60	60	60	60
<b>TYPICAL ROLL DIMENSIONS</b>						
Roll Length <sup>(3)</sup> , ft			870	560	430	340
Roll Width <sup>(3)</sup> , ft			22.5	22.5	22.5	22.5
Roll Area, ft <sup>2</sup>			19,575	12,600	9,675	7,650

[Product specifications continued on back]

**Product Specifications [continued]**

NOTES:

- <sup>(1)</sup>High Performance GSE White may have an overall ash content greater than 3.0% due to the white layer. These values apply to the black layer only.
- <sup>(2)</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>(3)</sup>Roll lengths and widths have a tolerance of  $\pm 1\%$ .
- High Performance GSE UltraFlex White Smooth Geomembrane is available in rolls weighing approximately 4,000 lb.
- All GSE geomembranes have dimensional stability of  $\pm 2\%$  when tested according to ASTM D 1204 and LTB of  $< -77^{\circ}$  C when tested according to ASTM D 746.
- \*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.