

High Performance GSE UltraFlex Smooth Geomembrane

METRIC

High Performance GSE UltraFlex Smooth is a co-extruded linear low density polyethylene (LLDPE) geomembrane specifically designed to be used in the most stringent applications. 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 to deliver superb UV resistance in exposed applications.



AT THE CORE:
An LLDPE geomembrane that is used in applications requiring increased flexibility and elongation properties, such as landfill closures and mining applications.

Product Specifications

These product specifications exceed GRI GM17

Tested Property	Test Method	Frequency	Minimum Average Value			
			1.00 mm	1.50 mm	2.00 mm	2.50 mm
Thickness, mm Lowest individual reading	ASTM D 5199	every roll	1.00 0.90	1.50 1.35	2.00 1.80	2.50 2.25
Density, g/cm ³ (max)	ASTM D 1505	90,000 kg	0.939	0.939	0.939	0.939
Tensile Properties (each direction) Strength at Break, N/mm Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 50 mm/min G.L. 50 mm	9,000 kg	29 900	42 900	56 900	66 900
Tear Resistance, N	ASTM D 1004	20,000 kg	100	150	200	250
Puncture Resistance, N	ASTM D 4833	20,000 kg	311	444	578	689
Multi-axial Break Resistance, %	ASTM D 5617	per formulation	90	90	90	90
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
Carbon Black Dispersion	ASTM D 5596	20,000 kg	Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾
Oxidative Induction Time, mins	ASTM D 3895, 200°C; O ₂ , 1 atm	90,000 kg	>140	>140	>140	>140
High Pressure Oxidative Induction Time, mins	ASTM D 5885, 150°C; O ₂ , 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
TYPICAL ROLL DIMENSIONS						
Roll Length ⁽²⁾ , m			265	171	131	103
Roll Width ⁽²⁾ , m			6.86	6.86	6.86	6.86
Roll Area, m ²			1,819	1,171	899	710

[Product specifications continued on back]

Product Specifications [continued]

NOTES:

- ⁽¹⁾Dispersion applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
- ⁽²⁾Roll lengths and widths have a tolerance of $\pm 1\%$.
- High Performance GSE UltraFlex Smooth is available in rolls weighing approximately 1,800 kg.
- 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, call 800.435.2008 or contact your local sales office.