



The Pioneer Of Geosynthetics

S I N C E 1 9 7 2

HIGH PERFORMANCE GSE ULTRAFLEX WHITE TEXTURED GEOMEMBRANE

High Performance GSE UltraFlex White Textured is a co-extruded linear low density polyethylene (LLDPE) geomembrane specifically designed to be used in the most stringent applications. A textured surface is available on one or both sides for applications that require increased frictional resistance. 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 GM 17.

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE			
			40 mil	60 mil	80 mil	100 mil
Thickness, (minimum average) mil (mm) Lowest individual reading (-10%)	ASTM D 5994	every roll	40 (1.00) 36 (0.91)	60 (1.50) 54 (1.40)	80 (2.00) 72 (1.80)	100 (2.50) 90 (2.30)
Density, g/cm ³	ASTM D 1505	200,000 lb	0.92	0.92	0.92	0.92
Tensile Properties (each direction) Strength at Break, lb/in-width (N/mm) Elongation at Break, %	ASTM D 6693, Type IV Dumbbell, 2 ipm G.L. 2.0 in (51 mm)	20,000 lb	115 (20) 500	168 (29) 500	224 (39) 500	270 (47) 500
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	25 (111)	38 (169)	50 (222)	60 (266)
Puncture Resistance, lb (N)	ASTM D 4833	45,000 lb	65 (289)	95 (422)	125 (556)	140 (622)
Multi-axial Break Resistance, %	ASTM D 5617	per formulation	90	90	90	90
Carbon Black Content ⁽¹⁾ , % (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 ⁽²⁾	Note ⁽²⁾	Note ⁽²⁾	Note ⁽²⁾
Asperity Height ⁽³⁾ , mil (mm)	ASTM D 7466	second roll	18 (0.45)	18 (0.45)	18 (0.45)	18 (0.45)
Oxidative Induction Time, mins	ASTM D 3895, 200°C; O ₂ , 1 atm	200,000 lb	>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 ⁽⁴⁾ , ft (m)	Double-Sided Textured		700 (213)	520 (158)	400 (122)	330 (101)
	Single-Sided Textured		650 (198)	420 (128)	320 (98)	250 (76)
Roll Width ⁽⁴⁾ , ft (m)			22.5 (6.86)	22.5 (6.86)	22.5 (6.86)	22.5 (6.86)
Roll Area, ft ² (m ²)	Double-Sided Textured		15,750 (1,463)	11,700 (1,087)	9,000 (836)	7,425 (690)
	Single-Sided Textured		14,625 (1,359)	9,450 (878)	7,200 (669)	5,625 (523)

NOTES:

- ⁽¹⁾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.
- ⁽²⁾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.
- ⁽³⁾Consult GSE for information regarding asperity heights exceeding the specified values.
- ⁽⁴⁾Roll lengths and widths have a tolerance of ± 1%.
- High Performance GSE UltraFlex White Textured is available in rolls weighing approximately 3,900 lb (1,769 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.