



GSE STANDARD PRODUCTS

# Product Data Sheet

## GSE UltraFlex

GSE UltraFlex is a high quality, linear low density polyethylene (LLDPE) geomembrane produced from specially formulated, virgin polyethylene with outstanding flexibility. This polyethylene resin is designed specifically for flexible geomembrane applications. Its high uniaxial and multiaxial elongation characteristics make it very suitable for applications where differential or localized subgrade settlements are expected such as leach pads, landfill closure caps, or any application where elongation or puncture resistance is critical. GSE UltraFlex contains approximately 97.5% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilizers; no fillers or extenders are used. GSE UltraFlex is the only material of its type on the market with many years of proven performance in applications throughout the world. *These product specifications meet or exceed GRI GM17.*

### Product Specifications

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM VALUE			
<b>Product Code</b>			LLD 030A000	LLD 040A000	LLD 060A000	LLD 080A000
Thickness, mils (mm) or per project specs	ASTM D 5199	every roll	27 (0.69)	36 (0.91)	54 (1.4)	72 (1.8)
Density, g/cm <sup>3</sup>	ASTM D 1505	200,000 lb	0.92	0.92	0.92	0.92
Tensile Properties (each direction)	ASTM D 6693, Type IV	20,000 lb				
Strength at Break, lb/in-width (N/mm)	Dumbell, 2 ipm		114 (20)	152 (27)	228 (40)	304 (53)
Elongation at Break, %	G.L. = 2.0 in (51 mm)		850	850	850	850
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	16 (71)	22 (98)	33 (147)	44 (200)
Puncture Resistance, lb (N)	ASTM D 4833	45,000 lb	46 (205)	62 (276)	92 (409)	123 (547)
Carbon Black Content, %	ASTM D 1603	20,000 lb	2.0	2.0	2.0	2.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	+Note 1	+Note 1	+Note 1	+Note 1
REFERENCE PROPERTY	TEST METHOD	FREQUENCY	NOMINAL VALUE			
Oxidative Induction Time, minutes	ASTM D 3895, 200° C 1 ATM	200,000 lb	>100	>100	>100	>100
Roll Length (approximate), ft (m)			1,120 (341)	870 (265)	560 (171)	430 (131)
Roll Width, ft (m)			22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)
Roll Area, ft <sup>2</sup> (m <sup>2</sup> )			25,200 (2,341)	19,575 (1,819)	12,600 (1,171)	9,675 (899)

#### NOTES:

- +Note 1: 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.
- GSE UltraFlex is available in rolls weighing about 3,800 lb (1,724 kg) respectively.
- All GSE geomembranes have dimensional stability of ±2% when tested with ASTM D 1204 and ITB of <-77° C when tested with ASTM D 746.

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<b>Americas</b>	GSE Lining Technology, Inc.	Houston, Texas	800-435-2008	281-443-8564	Fax: 281-230-8650
<b>Europe/Middle East/Africa</b>	GSE Lining Technology GmbH	Hamburg, Germany		49-40-767420	Fax: 49-40-7674233
<b>Asia/Pacific</b>	GSE Lining Technology Company Ltd.	Bangkok, Thailand		66-2-937-0091	Fax: 66-2-937-0097

This product data sheet is also available on our website at:

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