

# Product Data Sheet

GeoCHEM, Inc. Products

## GeoCHEM GEOFlex LLDPE

GeoCHEM GEOFlex LLDPE 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*, pond liners or any application where elongation or puncture resistance is critical. GeoCHEM GEOFlex LLDPE contains approximately 97.5% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilizers; no fillers or extenders are used. GeoCHEM GEOFlex is the only material of its type on the market with many years of proven performance. *These product specifications meet or exceed GRI GM 17.*

### Product Specifications

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM VALUE			
Product Code			LLD 0.30A000	LLD 040A001	LLD 060A000	LLD 080A000
Thickness, (minimum average) mil (mm) Lowest individual reading (-10%)	ASTM D 5199	every roll	30 (0.75) 27 (0.69)	40 (1.0) 36 (0.91)	60 (1.50) 54 (1.40)	80 (2.00) 72 (1.80)
Density, g/cm <sup>3</sup>	ASTM D 1505	200,000 lb	0.42	0.42	0.92	0.92
Tensile Properties (each direction) Strength at Break, lb/in-width (N/mm) Elongation at Break, %	ASTM D 6693, Type IV Dumbell, 2 ipm G.L. = 2.0 in (51 mm)	20,000 lb	114 (20) 300	152 (27) 800	228 (40) 800	304 (53) 300
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	16 (71)	22 (98)	33 (147)	44 (201)
Puncture Resistance, lb (N)	ASTM D 4833	45,000 lb	42 (190)	56 (250)	84 (370)	112 (500)
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, min	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 (6.91)	22.5 (6.91)	22.5 (6.9)	22.5 (6.91)
Roll Area, sq ft (sq m)			25,200 (2,341)	19,575 (1,819)	12,600 (1,171)	9,67 (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.
- GeoCHEM GEOFlex is available in rolls weighing about 3,800 lb (1,724 kg) respectively.
- All GeoCHEM LLDPE geomembranes have dimensional stability of  $\pm 2\%$  when tested with ASTM D 1204 and  $\Delta T$  of  $< 77^\circ\text{C}$  when tested with ASTM D 746.
- \*Roll lengths and widths have a tolerance of  $\pm 1\%$ .

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