

# GPS HDPE 30-40-60-80-100 mil

## Geomembrane Product Data Sheet

GPS HDPE liners are smooth, high quality, high density polyethylene (HDPE) geomembranes produced from specially formulated virgin polyethylene resin. This polyethylene resin is designed specifically for flexible geomembrane applications. It contains approximately 97.4% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilizers; no other additives, fillers or extenders are used. GPS HDPE liners have outstanding chemical resistance, mechanical properties, environmental stress crack resistance, dimensional stability and thermal aging characteristics. GPS HDPE liners have excellent resistance to UV radiation and are suitable for exposed conditions. These product specifications meet or exceed GRI GM 13.

### Product Specifications

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM VALUE				
Product Code			HDPE 030A000	HDPE 040A000	HDPE 060A000	HDPE 080A000	HDPE 100A000
Thickness, (minimum average) mil (mm) Lowest individual reading (-10%)	ASTME 5199	Every Roll	30 (0.75) 27 (0.69)	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 <sup>3</sup>	ASTM D 1505	200,000 lb	0.94	0.94	0.94	0.94	0.94
Tensile Properties: (each direction) Strength at Yield, lb/in-width (N/mm) Strength at Break, lb/in-width (N/mm) Elongation at Break, % Elongation at Yield, %	ASTM D 6693, Type IV Dumbbell, 2 ipm  G.L. 2.0 in (51 mm) G.L. 1.3 in (33 mm)	20,000 lb	114 (20) 63 (11) 700 12	152 (27) 84 (15) 700 12	228 (40) 126 (22) 700 12	304 (53) 168 (29) 700 12	380 (67) 210 (37) 700 12
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	21 (93)	28 (125)	42 (187)	56 (249)	70 (311)
Puncture Resistance, lb(N)	ASTM D 4833	45,000 lb	54 (240)	72 (320)	108 (480)	144 (640)	180 (800)
Carbon Black Content, %	ASTM D 1603*/4218	20,000 lb	2.0	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	+Note 1
Notched Constant Tensile Load, hr	ASTM D 5397, Appendix	20,000 lb	300	300	300	300	300
REFERENCE PROPERTY	TEST METHOD	FREQUENCY	NOMINAL VALUE				
Oxidative Induction Time, min.	ASTM D 3895, 200°C; O <sub>2</sub> 1 ATM	200,000 lb	>100	>100	>100	>100	>100
Roll Length (1) (approximate), ft (m)			1,120 (341)	870 (265)	560 (171)	430 (131)	340 (104)
Roll Width (1), ft (m)			22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)	22.5 (6.9)
Roll Area, ft2 (m2)			25,200 (2,341)	19,575 (1,819)	12,600 (1,171)	9,675 (899)	7,650 (711)

#### NOTES:

- +Note1: 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
- GPS HDPE Root Barrier is available in full rolls weighing about 3,900 lb (1,769 kg), or cut to size.
- All GPS geomembranes have dimensional stability of  $\pm 2\%$  when tested with ASTM D 1204 and LTB of  $< -77^{\circ}\text{C}$  when tested with ASTM D 746.
- (1) Roll lengths and widths have a tolerance of  $\pm 1\%$
- \*Modified

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1331 Specialty Drive, Vista, CA 92081  
Toll Free: 866-597-9298 760-597-9298  
Fax: 760-597-9574

Email: [sales@globalplasticsheeting.com](mailto:sales@globalplasticsheeting.com)  
[www.globalplasticsheeting.com](http://www.globalplasticsheeting.com)