

Titan HDL Leak Location liner is a smooth, spark-testable high-density polyethylene (HDPE) geomembrane that contains an integrated, specially formulated conductive layer on the bottom surface of the geomembrane. This liner can be easily tested for post-installation damage using equipment capable of performing spark testing in the field per ASTM D 7240. This product is used in applications that require post-installation testing on the liner system to increase the quality of the project. This product specification meets GRI-GM13.

TESTED PROPERTY	TEST METHOD	FREQUENCY	UNIT ENGLISH (METRIC)	MINIMUM AVERAGE ROLL VALUE ENGLISH (METRIC)			
				Titan 40HDL	Titan 60HDL	Titan 80HDL	Titan100HDL
Thickness Lowest individual reading	ASTM D 5199	every roll	mil (mm)	40 (1.00) 36 (0.90)	60 (1.50) 54 (1.35)	80 (2.00) 72 (1.80)	100 (2.50) 90 (2.25)
Density	ASTM D 1505	200,000 lb (90,000 kg)	g/cm ³	0.940	0.940	0.940	0.940
Tensile Properties (Each Direction) Strength at Break Strength at Yield Elongation at Break Elongation at Yield	ASTM D 6693, Type IV Dumbell, 2 ipm G.L. 2.0in (50mm) G.L. 1.3in (33mm)	20,000 lb (9,000 kg)	lb/in-width (N/mm) lb/in-width (N/mm) % %	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	ASTM D 1004	45,000 lb (20,000 kg)	lb (N)	28 (125)	42 (187)	56 (249)	70 (311)
Puncture Resistance	ASTM D 4833	45,000 lb (20,000 kg)	lb (N)	72 (320)	108 (480)	144 (640)	180 (800)
Carbon Black Content ⁽¹⁾	ASTM D 1603*/4218	20,000 lb (9,000 kg)	% (range)	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 (20,000 kg)		Note ⁽²⁾	Note ⁽²⁾	Note ⁽²⁾	Note ⁽²⁾
Notched Constant Tensile Load	ASTM D 5397, Appendix	200,000 lb (90,000 kg)	hr	500	500	500	500
Oxidative Induction Time	ASTM D 3895, 200°C; O ₂ , 1 atm	200,000 lb (90,000 kg)	mins	>100	>100	>100	>100
TYPICAL ROLL DIMENSIONS							
Roll Length ⁽³⁾			ft (m)	870 (265)	560 (171)	430 (131)	340 (104)
Roll Width ⁽³⁾			ft (m)	22.5 (6.86)	22.5 (6.86)	22.5 (6.86)	22.5 (6.86)
Roll Area			ft ² (m ²)	19,575 (1,819)	12,600 (1,171)	9,675 (899)	7,650 (711)

NOTES: *modified

(1) Leak Location Smooth may have an overall ash content of 3.0%. These values apply to the non-conductive black layers.

(2) Dispersion applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.

(3) Roll lengths and widths have a tolerance of ±1%.

Leak Location Smooth is available in rolls weighting approximately 3,900 lb (1,800 kg)

• All geomembranes have a dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77°C when tested according to ASTM D 746.

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