

HDPE SMOOTH GEOMEMBRANE

HIGH DENSITY POLYETHYLENE



Titan HD is a smooth high-density polyethylene (HDPE) geomembrane manufactured with the highest quality resin specifically formulated for flexible geomembranes. This product is used in applications that require excellent chemical resistance and endurance properties. This product specification meets GRI-GM13.

TESTED PROPERTY	TEST METHOD	FREQUENCY	UNIT ENGLISH (METRIC)	MINIMUM AVERAGE ROLL VALUE				
				TITAN 30HD	TITAN 40HD	TITAN60HD	TITAN 80HD	TITAN 100HD
Thickness Lowest Individual reading	ASTM D 5199	every roll	mil (mm)	30 (0.750) 27 (0.675)	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 lbs (90,000 kg)	g/cm ³	0.940	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 Dumbbell, 2 ipm G.L. 2.0 in (50mm) G.L. 1.3 in (33mm)	20,000 lbs (9,000 kg)	lb/in-width (N/mm) lb/in-width (N/m) % %	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	ASTM D 1004	45,000 lbs (20,000 kg)	lb (N)	21 (93)	28 (125)	42 (187)	56 (249)	70 (311)
Puncture Resistance	ASTM D 4833	45,000 lbs (20,000 kg)	lb (N)	54 (240)	72 (320)	108 (480)	144 (640)	180 (800)
Carbon Black Content	ASTM D 1603*/4218	20,000 lbs (9,000 kg)	% (range)	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0	2.0 – 3.0
Carbon Black Dispersion	ASTM D 5596	45,000 lbs (20,000 kg)		Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾	Note ⁽¹⁾
Notched Constant Tensile Load	ASTM D 5397, Appendix	200,000 lbs (90,000 kg)	hr	300	300	300	300	300
Oxidative Induction Time	ASTM D 3895, 200 °C; O ₂ , 1 atm	200,000 lbs (90,000 kg)	mins	>100	>100	>100	>100	>100
TYPICAL ROLL DIMENSIONS								
Roll Length ⁽²⁾			ft (m)	1,120 (341)	870 (265)	560 (171)	430 (131)	340 (104)
Roll Width ⁽²⁾			ft (m)	22.5 (6.86)	22.5 (6.86) 2	22.5 (6.86)	86) 22.5 (6.86)	22.5 (6.86)
Roll Area ⁽²⁾			ft ² (m) ²	25,200 (2,341)	19,575 (1,819)	12,600 (1,171)	9,675 (899)	7,650 (711)

NOTES:

- 1. Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be category 1 or 2. No more 1 view from category 3. (2) Roll Lengths and widths have a tolerance of ±1%.
- o HDPE Smooth is available in rolls weighing approximately 4,000 lb (1,800 kg).
- o All 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.
- o *Modified

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