



HDPE Geomembrane : Black Double-Sided Textured

Product Specifications / Data Sheet

GPF's HDPE Double-Sided Textured Geomembrane is a high quality, black coloured product that is manufactured in our state of the art Saudi Arabian facility. GPF uses 97.5% pure high density polyethylene virgin polymer and 2.5% carbon black with trace amounts of antioxidants and heat stabilizers.

GPF's HDPE Double-Sided Textured Geomembrane is UV stabilized, highly resistant to chemicals, dimensionally stable with exceptional durability including high puncture and stress crack resistance.

GPF's HDPE Double-Sided Textured Geomembrane exceeds the industry standard GRI GM13, as regularly tested in our full laboratory integrated into our factory and also as certified by multiple international independent expert plastics and polymer laboratories including TRI Environmental and Excelplas.

Test Property	Unit	Test Method	Minimum Average Value (per GRI GM13)				
Thickness ⁽¹⁾	mils	ASTM D 5199	30	40	60	80	100
Lowest individual (-10%)	mm		0.75	1.0	1.5	2.0	2.5
Density	g/cm ³	ASTM D 792	≥ 0.94	≥ 0.94	≥ 0.94	≥ 0.94	≥ 0.94
Strength at Yield (Both Directions)	lb/in	ASTM D 6693	63	84	126	168	210
Strength at Break (Both Directions)	lb/in	Type IV Dumbbell, 50mm/min	45	60	90	120	150
Elongation at Yield (Both Directions)	%	Gage length 33 mm for Yield Elongation	12	12	12	12	12
Elongation at Break (Both Directions)	%	Gage length 50mm for Break Elongation	100	100	100	100	100
Tear Resistance	lb	ASTM D 1004	21	28	42	56	70
Puncture Resistance	lb	ASTM D 4833	45	60	90	120	150
Carbon Black Content	%	ASTM D 1603	2.0% - 3.0%				
Carbon Black Dispersion	Category	ASTM D 5596	Note (2)				
Dimensional Stability	%	ASTM D 1204 (120 °C / 1 h)	± 2	± 2	± 2	± 2	± 2
Melt Flow Index ⁽³⁾	g/10 min	ASTM D 1238 (190 °C / 2.16 kg)	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
Low Temperature Brittleness	°C	ASTM D 746	-77	-77	-77	-77	-77
Stress Crack Resistance (NCTL)	hr.	ASTM D 5397	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500
Oxidative Induction Time (Standard; S-OIT)	min	ASTM D 3895	100	100	100	100	100
Oxidative Induction Time (High Pressure; HP-OIT)	min	ASTM D 5885	400	400	400	400	400

Roll dimensions							
Size A)							
Roll Width (approx.) ⁽⁴⁾	ft	-----	23	23	23	23	23
Roll Length (approx.)	ft	-----	800	600	400	300	240
Roll Area (approx.)	ft ²	-----	18,400	13,800	9,200	6,900	5,520
Size B)							
Roll Width (approx.) ⁽⁴⁾	ft	-----	26	26	26	26	26
Roll Length (approx.)	ft	-----	700	525	350	265	210
Roll Area (approx.)	ft ²	-----	18,200	13,650	9,100	6,890	5,460

Notes:

(1) One (1) measurement taken every 1 meter along roll width - 10% lowest individual of 10 values.

(2) Carbon black dispersion (only near spherical agglomerates) for 10 different views: 9 in Categories 1 or 2 and 1 in Category 3.

(3) Standard test conditions: 190 °C / 2.16 kg.

(4) Roll Width and Length have a tolerance of ± 1%.

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