

TEXTURED HDPE GEOMEMBRANE

METRIC UNITS

Minimum Average Values

Property	Test Method	1.00 mm	1.50 mm	2.00 mm	2.50 mm
Thickness, microns	ASTM D 5994				
minimum average		950	1,425	1,900	2,375
lowest individual of 8 of 10 readings		900	1,350	1,800	2,250
lowest individual of 10 readings		850	1,275	1,700	2,125
Asperity Height ¹ , microns	ASTM D 7466	250	250	250	250
Sheet Density, g/cc	ASTM D 1505/D 792	0.940	0.940	0.940	0.940
Tensile Properties²	ASTM D 6693				
1. Yield Strength, kN/m		15	22	29	37
2. Break Strength, kN/m		11	16	21	26
3. Yield Elongation, %		12	12	12	12
4. Break Elongation, %		100	100	100	100
Tear Resistance, N	ASTM D 1004	125	187	249	311
Puncture Resistance, N	ASTM D 4833	267	400	534	667
Stress Crack Resistance ³ , hrs	ASTM D 5397 (App.)	300	300	300	300
Carbon Black Content ⁴ , %	ASTM D 1603	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	--Note 5--			
Oxidative Induction Time (OIT)					
Standard OIT, minutes	ASTM D 3895	100	100	100	100
Oven Aging at 85°C	ASTM D 5721				
High Pressure OIT - % retained after 90 days	ASTM D 5885	80	80	80	80
UV Resistance ⁶	GRI GM11				
High Pressure OIT ⁷ - % retained after 1600 hrs	ASTM D 5885	50	50	50	50
Seam Properties	ASTM D 6392 (@ 5 cm/min)				
1. Shear Strength, kN/m		14	24	28	35
2. Peel Strength, kN/m - Hot Wedge		10.5	15.9	21.2	26.4
- Extrusion Fillet		9.1	13.6	18.2	22.8
Roll Dimensions					
1. Width (meters):		7	7	7	7
2. Length (meters):		228.7	152.4	114.3	91.5
3. Area (square meters):		1,603	1,068	801	641
4. Gross weight (kilograms, approx):		1,588	1,588	1,574	1,574

1 Of 10 readings; 8 must be ≥ 180 microns and lowest individual reading must be ≥ 130 microns.

2 Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction. Yield elongation is calculated using a gauge length of 33 mm; Break elongation is calculated using a gauge length of 50 mm.

3 The yield stress used to calculate the applied load for the SP-NCTL test should be the mean value via MQC testing.

4 Other methods such as ASTM D 4218 or microwave methods are acceptable if an appropriate correlation can be established.

5 Carbon black dispersion for 10 different views: Nine in Categories 1 and 2 with one allowed in Category 3.

6 The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.

7 UV resistance is based on percent retained value regardless of the original HP-OIT value.

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