



## **SPECIFICATION OF HIGH DENSITY POLYETHYLENE (HDPE) GEOMEMBRANE**

<b>Property</b>	<b>Test Method</b>	<b>Nominal Values</b>					
		GS	GS	GS	GS	GS	GS
		20	30	40	60	80	100
Thickness, mm	ASTM D 751/1593/5199	0.50	0.75	1.0	1.5	2.0	2.5
Density, g/cc	ASTM D 792/1505	0.94	0.94	0.94	0.94	0.94	0.94
Strength at Break, N/mm	ASTM D 6693, Type IV	14	20	34	52	69	86
Strength at Yield, N/mm	ASTM D 6693, Type IV	9	11	16	25	33	41
Elongation at Break, %	ASTM D 6693, Type IV	700	700	750	800	800	800
Elongation at Yield, %	ASTM D 6693, Type IV	12	12	15	15	15	15
Tear Resistance, N	ASTM D 1004	73	95	146	222	293	369
Puncture Resistance, N	FTMS 101, Method 2065	157	240	267	400	533	667
Carbon Black Content, %	ASTM D 1603	2-3	2-3	2-3	2-3	2-3	2-3
Carbon Black Dispersion	ASTM D 3015	A1/A 2	A1/A 2	A1/A 2	A1/A 2	A1/A 2	A1/A 2
Dimensional Stability, % (each direction)	ASTM D 1204, 100°C 1hr	±1	±1	±1	±1	±1	±1
Environmental Stress Crack Resistance, hr	ASTM D 1693, Cond. B	>200 0	>200 0	>200 0	>200 0	>200 0	>200 0
Low Temperature Brittleness, °C	ASTM D 746, Cond. B	<-84	<-84	<-84	<-84	<-84	<-84
Oxidative Induction Time, minutes	ASTM D 3895, 200°C Pure O <sub>2</sub> , 1 atm	100	100	100	100	100	100
Ozone Resistance	ASTM D 1149, 7 days 100ppm	No Cracks	No Cracks	No Cracks	No Cracks	No Cracks	No Cracks
Water Absorption, % wt. change	ASTM D 570	<0.0 1	<0.0 1	<0.0 1	<0.0 1	<0.0 1	<0.0 1



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Moisture Vapour Transmission, g/m <sup>2</sup>	ASTM E 96	<0.0 01	<0.0 01	<0.0 01	<0.0 01	<0.0 01	<0.0 01
Melt Flow Index, g/10 minutes	ASTM D 1238, Cond. 190/2.16	<=1. 0	<=1. 0	<=1. 0	<=1. 0	<=1. 0	<=1. 0