

Garfilm EM6 is a Milky White film specially developed as an insulating material for rotating electrical machines and exhibits superior thermal ageing performance compared to normal polyester films.

Sr. No.	Property	Unit	Test Method	Typical Values						
General										
1	Thickness	Micron	GPL Method	36	75	125	190	250	300	350
2	Yield	M ² /Kg	GPL Method	19.8	9.5	5.71	3.76	2.86	2.38	2.04
3	Density	gm/cc	ASTM-D-1505	1.4	1.4	1.4	1.4	1.4	1.4	1.4
4	Water Absorption (Max)	%	ASTM-D-570	0.6	0.6	0.6	0.6	0.6	0.6	0.6
5	Service Temp	°C	GPL Method	-70 to 150						
6	Oligomer Extraction	%	GPL Method	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Mechanical										
1	Tensile Strength at Break (MD/TD)	Kg/cm ²	ASTM-D-882	2000	2000	1900	1900	1900	1700	1600
2	Elongation (MD/TD)	%	ASTM-D-882	120	120	130	160	160	170	170
3	Slip (COF) - Static	—	ASTM-D-1894	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Optical										
1	Haze	%	ASTM-D-1003	50.0	60.0	80.0	85.0	92.0	95.0	95.0
Thermal										
1	Shrinkage @ 150°C / 30 Minute		ASTM-D-1204							
	MD	%		1.2	1.2	1.0	1.0	1.0	1.0	1.0
	TD	%		0.4	0.4	0.4	0.4	0.4	0.4	0.4
2	Shrinkage @ 190°C / 5 Minute		ASTM-D-1204							
	MD	%		2.0	2.0	2.0	2.0	2.0	2.0	2.0
	TD	%		1.0	1.0	1.0	1.0	1.0	1.0	1.0
3	Melting point	°C	DSC	250	250	250	250	250	250	250
4	Specific Heat @ 25°C	cal/g°C	-	0.32	0.32	0.32	0.32	0.32	0.32	0.32
5	Coeff of Thermal Expansion Between 20°C & 50°C	1/K(cm/cm°C)	-	36 x 10 ⁻⁶ (MD) 23 x 10 ⁻⁶ (TD)						
Electrical										
1	Break Down Voltage (2" Brass Electrode)	KV	ASTM-D-149	7.5	12.5	15.5	18.5	19.5	21.5	22.5
2	Surface Resistivity	Ohm	ASTM-D-257	10 ¹²	10 ¹²	10 ¹²	10 ¹²	10 ¹²	10 ¹²	10 ¹²
3	Volume Resistivity @RT.	Ohm / m	ASTM-D-257	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶
4	Dielectric Constant	-	ASTM-D-150	2.8 - 4.0						
5	Permittivity 23°C 50 Hz 23°C 1 kHz 23°C 10 kHz 0°C 50 Hz 50°C 50 Hz 100°C 50 Hz 150°C 50 Hz	-	IEC 250	3.26 3.24 3.21 3.26 3.27 3.35 3.65						
6	Dissipation Factor 23°C 50 Hz 23°C 1 kHz 23°C 10 kHz 0°C 50 Hz 50°C 50 Hz 100°C 50 Hz 150°C 50 Hz	-	IEC 250	0.002 0.0055 0.011 0.004 0.0015 0.007 0.006						