

Technical Specification

ARYAPET – A600

ARYAPET A600 is a Milky White polyester film suitable as an insulating material for rotating electrical machines. It has superior thermal properties as compared with normal polyester film.

Sr. No	Properties	Unit	Test Method	Typical Value					
General									
1	Thickness	Micron (Gauge)	JBF Method	36 (144)	50 (200)	75 (300)	100 400	125 500	
2	Yield	M ² /Kg	JBF Method	19.8	14.3	9.5	7.14	5.71	
3	Density	gm/cc	ASTM D 1505	1.4	1.4	1.4	1.4	1.4	
4	Water Absorption	%	ASTM D 570	0.55	0.55	0.55	0.55	0.55	
5	Oligomer Extraction	%	JBF Method	1.3	1.3	1.3	1.3	1.3	
6	Service Temp	°C	JBF Method	-70 to 150					
Mechanical									
1	Tensile Strength at break	MD	Kg/cm ² (kpsi)	ASTM D 882	2000 (28.4)	1900 (27.0)	1900 (27.0)	1800 (25.5)	1800 (25.5)
		TD			2100 (29.8)	2000 (28.4)	2000 (28.4)	1900 (27.0)	1900 (27.0)
2	Elongation at break	MD	%	ASTM D 882	100	100	110	110	120
		TD			100	100	100	100	110
3	Co-efficient of friction	Static	--	ASTM D 1894	0.40	0.40	0.40	0.45	0.45
		Dynamic			0.45	0.40	0.40	0.40	0.40
Thermal									
1	Shrinkage @ 150° C/30'	MD	%	ASTM D 1204	1.4	1.4	1.4	1.4	1.4
		TD			0.4	0.4	0.4	0.4	0.4
2	Melting Point	°C		DSC	255	255	255	255	255
3	Specific Heat @ 25° C	Cal/g/°C		-	0.32	0.32	0.32	0.32	0.32
4	Coeff of Thermal Expansion Between 20° C & 25° C	1/k/cm/cm°C		-	MD- 36 X 10 ⁻⁶ TD -36 X 10 ⁻⁶				
Optical									
1	Haze	%	ASTM D 1003	50	55	60	70	80	
Electrical									
1	Break Down Voltage	KV	ASTM D 149	7.5	9.5	12.5	14.5	17	
2	Surface Resistivity	Ohm	ASTM D 257	10 ¹²					
3	Volume Resistivity @ RT	Ohm cm	ASTM D 257	10 ¹⁶					

4	Dielectric Constant	-	ASTM D 150	2.6-3.7
5	Dissipation Factor	--	IEC 250	0.002
	23° C – 50 Hz			0.005
	23° C – 1 KHz			0.011
	23° C – 1 MHz			0.004
	0° C – 50 Hz			0.0015
	50° C – 50 Hz			0.007
	100° C – 50 Hz			0.006
	150° C – 50 Hz			
6	Permittivity	--	IEC 250	3.26
	23° C – 50 Hz			3.24
	23° C – 1 KHz			3.21
	23° C – 1 MHz			3.26
	0° C – 50 Hz			3.27
	50° C – 50 Hz			3.35
	100° C – 50 Hz			
	150° C – 50 Hz			3.65
Chemical Resistance				
1	Dilute acids and Alkalies			Good
2	Concentrated Alkalies			Poor
3	Concentrated HCL			Fair
4	Concentrated H ₂ SO ₄			Poor
5	Greases , Oils & Fats			Good
6	Organic Solvents, Alcohols & Hydrocarbons			Good
7	Ketones , Esters & Chlorinated compounds			Fairly Good
8	Phenols, Cresols & Chlorinated phenols			Poor

MD = Machine Direction, TD = Transverse Direction

Storage & Handling

ARYA PET need to be stocked in a closed warehouse & should not be exposed to the direct sun light or light sources , Avoid extremes of humidity , It is recommended to store below 40°C in dry places

The information given above is to the best of our knowledge and experience. Some of the properties can be changed as a result of suppliers' efforts to improve upon the quality or production efficiency of the subject. The information is believed to be true and accurate and is not intended to violate any statutory condition or right of a third party. **JBF RAK LLC** makes no warranty, express or implied, as to the fitness of the product for any specific use or purpose. The above data is purely for readers' consideration, investigation and verification and should be read in conjunction with the conditions for sale or contract.

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Sr. No	Properties		Unit	Test Method	Typical Value				
General									
1	Thickness		Micron (Gauge)	JBF Method	190 (760)	225 (900)	250 (1000)	300 (1200)	350 (1400)
2	Yield		M ² /Kg	JBF Method	3.76	3.17	2.86	2.38	2.04
3	Density		gm/cc	ASTM D 1505	1.4	1.4	1.4	1.4	1.4
4	Water Absorption		%	ASTM D 570	0.55	0.55	0.55	0.55	0.55
5	Oligomer Extraction		%	JBF Method	1.3	1.3	1.3	1.3	1.3
6	Service Temp		°C	JBF Method	-70 to 150				
Mechanical									
1	Tensile Strength at break	MD	Kg/cm ² (ksi)	ASTM D 882	1800 (25.5)	1800 (25.5)	1800 (25.5)	1700 (24.2)	1700 (24.2)
		TD			1900 (27.0)	1900 (27.0)	1900 (27.0)	1800 (25.6)	1800 (25.6)
2	Elongation at break	MD	%	ASTM D 882	120	130	130	140	140
		TD			110	120	120	125	125
3	Co-efficient of friction	Static	--	ASTM D 1894	0.35	0.35	0.35	0.35	0.35
		Dynamic			0.30	0.30	0.30	0.30	0.30
Thermal									
1	Shrinkage @ 150° C/30'	MD	%	ASTM D 1204	1.2	1.2	1.2	1.2	1.2
		TD			0.4	0.4	0.4	0.4	0.4
3	Melting Point		°C	DSC	255	255	255	255	255
4	Specific Heat @ 25° C	Cal/g/°C		-	0.32	0.32	0.32	0.32	0.32
5	Coeff of Thermal Expansion Between 20° C & 25° C	1/k/cm/c m°C		-	MD- 36 X 10 ⁻⁶ TD -36 X 10 ⁻⁶				
Optical									
1	Haze		%	ASTM D 1003	86	90	93	94	96
Electrical									
1	Break Down Voltage		KV	ASTM D 149	20	21	22	24	26
2	Surface Resistivity		Ohm	ASTM D 257	10 ¹²				
3	Volume Resistivity @ RT		Ohm cm	ASTM D 257	10 ¹⁶				

4	Dielectric Constant	-	ASTM D 150	2.6-3.7
5	Dissipation Factor	--	IEC 250	0.002
	23° C – 50 Hz			0.005
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	23° C – 50 Hz			3.24
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