

## Arlon AD350A PTFE/Woven Fiberglass/Ceramic Filled Composite

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE

### Material Notes:

Tighter Dielectric Tolerance Low Z-Axis Thermal Expansion Ceramic Filled PTFE High Thermal Conductivity Large Panel Size Benefits: Higher Consistency of Performance Superior PTH Adhesion Heat Dissipation and Management Multiple boards per panel; Larger Printed Circuit Board formats Typical Applications: High Power Applications Low Noise Amplifiers (LNAs) Low Noise Blocks (LNBs) Filters and Couplers Information provided by Arlon Materials for Electronics (MED).

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Arlon-AD350A-PTFEWoven-FiberglassCeramic-Filled-Composite.php](http://www.lookpolymers.com/polymer_Arlon-AD350A-PTFEWoven-FiberglassCeramic-Filled-Composite.php)

Physical Properties	Metric	English	Comments
Density	2.10 g/cc	0.0759 lb/in <sup>3</sup>	ASTM D792 Method A
Water Absorption	0.10 %	0.10 %	IPC TM-650 2.6.2.2
Outgassing - Total Mass Loss	0.00 %	0.00 %	Water Vapor Recovered; NASA SP-R-0022A
	@Pressure <= 1.33e-10 MPa, Temperature 125 °C	@Pressure <= 1.93e-8 psi, Temperature 257 °F	
	0.020 %	0.020 %	
	@Pressure <= 1.33e-10 MPa, Temperature 125 °C	@Pressure <= 1.93e-8 psi, Temperature 257 °F	Collected Volatiles; NASA SP-R-0022A
	0.020 %	0.020 %	
	@Pressure <= 1.33e-10 MPa, Temperature 125 °C	@Pressure <= 1.93e-8 psi, Temperature 257 °F	NASA SP-R-0022A

Mechanical Properties	Metric	English	Comments
Tensile Strength	>= 138 MPa	>= 20000 psi	IPC TM-650 2.4.18
Modulus of Elasticity	>= 4.83 GPa	>= 700 ksi	ASTM D638
Flexural Modulus	>= 3.72 GPa	>= 540 ksi	ASTM D790
Compressive Modulus	>= 2.41 GPa	>= 350 ksi	ASTM D695
Peel Strength	2.63 kN/m	15.0 pli	To Copper (1/2 oz.); A, TS; IPC TM-650 2.4.8
	2.98 kN/m	17.0 pli	To Copper (1 oz.); A, TS; IPC TM-650 2.4.8

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	5.00 $\mu\text{m}/\text{m}\cdot\text{°C}$	2.78 $\mu\text{in}/\text{in}\cdot\text{°F}$	x direction; IPC TM-650 2.4.24
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
	9.00 $\mu\text{m}/\text{m}\cdot\text{°C}$	5.00 $\mu\text{in}/\text{in}\cdot\text{°F}$	y direction; IPC TM-650 2.4.24
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
CTE, linear, Transverse to Flow	35.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	19.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	z direction; IPC TM-650 2.4.24
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
Thermal Conductivity	0.450 W/m-K	3.12 BTU-in/hr-ft <sup>2</sup> -°F	ASTM E1225
	@Temperature 100 °C	@Temperature 212 °F	
Flammability, UL94	V-0	V-0	Vertical Burn

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.20e+15 ohm-cm	1.20e+15 ohm-cm	C96/35/90; IPC TM-650 2.5.17.1
Surface Resistance	4.50e+13 ohm	4.50e+13 ohm	C96/35/90; IPC TM-650 2.5.17.1
Dielectric Constant	3.45 - 3.55	3.45 - 3.55	C23/50; IPC TM-650 2.5.5.5
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	
Dielectric Breakdown	>= 45000 V	>= 45000 V	D48/50; ASTM D149
Dissipation Factor	0.0030	0.0030	C23/50; IPC TM-650 2.5.5.5
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	
Arc Resistance	>= 180 sec	>= 180 sec	D48/50; IPC TM-650 2.5.1B

Descriptive Properties	Value	Comments
Temperature Coefficient of Dielectric (ppm/°C)	-55	IPC TM-650 2.5.5.5; at 10 GHz (-40 - 150°C)

## Contact Songhan Plastic Technology Co.,Ltd.

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