Arlon® AD300

Polytetrafluoroethylene

Arlon-MED

Message:

Arlon's AD Series is a group of woven fiberglass-reinforced PTFE composite materials designed for use as printed circuit board substrates. These materials combine the excellent low loss electrical properties of PTFE resin with the enhanced value of costeffective heavier fiberglass styles to provide low cost laminate materials suitable for high volume commercial wireless communication applications.
The AD Series is currently available in a limited combination of dielectric thickness (0.015" - 0.062") and dielectric constant (2.5 - 3.5). Thicker dielectrics can be developed to meet customer requirements. The higher weight ratio of fiberglass to PTFE resin yields laminates with greater dimensional stability than is normally expected of PTFE-based substrates.
Stability of PTFE over a wide frequency range and low loss makes AD Series materials ideal for a variety of microwave and R/F applications in telecom industry. AD Series laminate materials may be processed with standard PTFE materials. Because there is a relatively higher percentage of fiberglass, thermal expansion is reduced in all directions, improving plated through hole reliability.

General Information			
Filler / Reinforcement	Glass Fiber		
Features	Fast Molding Cycle Good Dimensional Stability		
Uses	Appliance Components Electrical/Electronic Applications		
Forms	Pellets		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	2.40	g/cm³	ASTM D792A
Water Absorption (23°C, 24 hr)	0.070	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			ASTM D638
23°C [1]	3560	MPa	
23°C [2]	4870	MPa	
Flexural Modulus (23°C)	3720	MPa	ASTM D790
Compressive Modulus	2520	MPa	ASTM D695
Films	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D882
MD : Yield	144	MPa	
TD : Yield	119	MPa	
Peel Strength [3]	-2.5	kN/m	Internal Method
Coefficient of Linear Thermal Expansion			
X Axis : 0 to 100°C	1.2E-5	cm/cm/°C	Internal Method
Y Axis : 0 to 100°C	1.5E-5	cm/cm/°C	Internal Method
Z Axis : 0 to 100°C	9.5E-5	cm/cm/°C	
Breakdown Voltage	> 45000	V	ASTM D149
Thermal	**Nominal Value**	**Unit**	**Test Method**

Thermal Conductivity (100°C)	0.24	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.5E+7	ohms	Internal Method
Volume Resistivity	1.2E+15	ohms·cm	Internal Method
Dielectric Constant (23°C)	3.00		Internal Method
Dissipation Factor (10.0 GHz)	3.0E-3		Internal Method
Arc Resistance	> 180	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
NOTE			
1.	TD		
2.	MD		
3.	After Thermal Stress		

Recommended distributors for this material

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