Arlon® 45NK

Epoxy; Epoxide

Arlon-MED

Message:

45NK is a woven Kevlar® aramid fiber reinforced multifunctional epoxy laminate and prepreg system
engineered to provide in-plane CTE values as low as 6 ppm/°C for compatibility with leadless alumina ceramic chip carriers (LCCC's) and other low expansion SMT devices where control of laminate expansion is critical for solder joint reliability. 45NK exceeds the requirements of IPC 4101/50 (Type AFG).

General Information			
Filler / Reinforcement	Aramid Fiber		
Uses	Computer Components Electrical/Electronic Applications Laminates		
RoHS Compliance	RoHS Compliant		
Forms	Sheet		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.50	g/cm³	ASTM D792A
Water Absorption (24 hr)	0.80	%	Internal Method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	153000	MPa	Internal Method
Poisson's Ratio [1]	0.20		ASTM D3039
Films	**Nominal Value**	**Unit**	**Test Method**
Peel Strength			Internal Method
-- [2]	1.1	kN/m	
-- [3]	1.1	kN/m	
-- [4]	1.1	kN/m	
Expansion Rate (50 to 260°C) [5]	2.8	%	Internal Method
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	170	°C	Internal Method
CLTE - Flow			
-- [6]	5.0E-6 to 7.0E-6	cm/cm/°C	Internal Method
< 175°C [7]	7.5E-5	cm/cm/°C	Internal Method
> 175°C [8]	2.3E-4	cm/cm/°C	Internal Method
Thermal Conductivity (100°C)	0.22	W/m/K	ASTM E1461
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity [9]	3.2E+13	ohms	Internal Method
Volume Resistivity [10]	1.3E+13	ohms·cm	Internal Method
Dielectric Strength	30	kV/mm	Internal Method
Dielectric Constant (1 MHz)	3.90		Internal Method

Dissipation Factor (1 MHz)	0.016		Internal Method
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
NOTE			
1.	x and y direction		
2.	After Thermal Stress		
3.	After Process Solutions		
4.	At Elevated Temperatures		
5.	Z-axis		
6.	X-axis		
7.	Z-axis		
8.	Z-axis		
9.	C96/35/90		
10.	C96/35/90		

Recommended distributors for this material

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