

Arlon 85N Polyimide Laminate and Prepreg

Category : Polymer , Thermoset , Polyimide, TS

Material Notes:

85N is a polyimide and laminate prepreg system for PWBs requiring resistance to high temperature, both in process and in end-use application. Bromine-free chemistry provides thermal stability for applications with sustained high in-use temperatures as well as for use in lead-free soldering applications. Low Z-expansion minimizes the risk of latent PTH defects caused during solder reflow and device attachment. Up to 50% or more reduction in cure time compared with traditional polyimide cycles. Electrical and mechanical properties meeting the requirements of IPC-4101/40 and /41. Toughened, Non-MDA chemistry resists drill cracking. Typical Applications: PCBs that are subjected to high temperatures during processing, such as lead-free soldering. Applications with significant lifetimes at high temperatures, such as aircraft engine instrumentation, down-hole drilling, under-hood automotive controls, burn-in-boards, or industrial sensors. This data represents typical values for the production material and should not be used as material specifications. Information provided by ARLON Silicone Technologies Division.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arlon-85N-Polyimide-Laminate-and-Prepreg.php

Physical Properties	Metric	English	Comments
Water Absorption	0.27 %	0.27 %	IPC TM-650 2.6.2.1

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	22.1 GPa	3200 ksi	IPC TM-650 2.4.18.3
Poissons Ratio	0.15	0.15	ASTM D3039
Peel Strength	1.24 kN/m	7.10 pli	To Copper (1 oz./35 micron); After Process Solutions; IPC TM-650 2.4.8
	1.24 kN/m	7.10 pli	To Copper (1 oz./35 micron); After Thermal Stress; IPC TM-650 2.4.8
	1.24 kN/m	7.10 pli	To Copper (1 oz./35 micron); At Elevated Temperatures; IPC TM-650 2.4.8.2

Thermal Properties	Metric	English	Comments
CTE, linear	16.0 $\mu\text{m/m-}^{\circ}\text{C}$	8.89 $\mu\text{in/in-}^{\circ}\text{F}$	IPC TM-650 2.4.41
CTE, linear, Transverse to Flow	55.0 $\mu\text{m/m-}^{\circ}\text{C}$	30.6 $\mu\text{in/in-}^{\circ}\text{F}$	z (< Tg); IPC TM-650 2.4.24
	@Temperature <=250 $^{\circ}\text{C}$	@Temperature <=482 $^{\circ}\text{F}$	
	149 $\mu\text{m/m-}^{\circ}\text{C}$	82.8 $\mu\text{in/in-}^{\circ}\text{F}$	z (> Tg); IPC TM-650 2.4.24
	@Temperature >=250 $^{\circ}\text{C}$	@Temperature >=482 $^{\circ}\text{F}$	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² - $^{\circ}\text{F}$	ASTM E1461

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	250 °C	482 °F	TMA, IPC TM-650 2.4.24
Decomposition Temperature	387 °C	729 °F	Onset; IPC TM-650 2.3.41
	407 °C	765 °F	5 percent; IPC TM-650 2.3.41
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.50e+14 ohm-cm	1.50e+14 ohm-cm	C96/35/90; IPC TM-650 2.5.17.1
	3.00e+14 ohm-cm	3.00e+14 ohm-cm	E24/125; IPC TM-650 2.5.17.1
Surface Resistance	1.60e+15 ohm	1.60e+15 ohm	C96/35/90; IPC TM-650 2.5.17.1
	1.60e+15 ohm	1.60e+15 ohm	E24/125; IPC TM-650 2.5.17.1
Dielectric Constant	4.2	4.2	May vary with resin %; IPC TM-650 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	57.1 kV/mm	1450 kV/in	IPC TM-650 2.5.6.2
Dissipation Factor	0.010	0.010	IPC TM-650 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	143 sec	143 sec	IPC TM-650 2.5.1

Descriptive Properties	Value	Comments
IPC Delamination - T260 (minutes)	> 60	IPC TM-650 2.4.24.1
IPC Delamination - T288 (minutes)	> 60	IPC TM-650 2.4.24.1
IPC Delamination - T300 (minutes)	> 60	IPC TM-650 2.4.24.1
Z-Axis Expansion (%)	1.2	IPC TM-650 2.4.24 (50-260°C)

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China