

Arlon 49N Multifunctional Epoxy Low-Flow Prepreg

Category : Polymer , Thermoset , Epoxy , Epoxy , Thermally Conductive

Material Notes:

49N is a low-flow epoxy prepreg engineered for bonding multilayer epoxy rigid-flex or attaching heat sinks to multilayer PCBs. With a high Tg, the prepreg can be used in high-performance or high-temperature applications compared to a standard difunctional epoxy low-flow. Multifunctional epoxy resin system with a Tg of 170°C offers improved high-temperature and PTH reliability. Engineered with discrete flow ranges and fiberglass styles to optimize flexibility. Electrical and mechanical properties meeting the requirements of IPC-4101/21, modified to be "Low-Flow" RoHS/WEEE compliant. Short cure (45 minutes at 360°F) for improved manufacturing productivity. Typical Applications: Bonding multilayer epoxy rigid-flex, Bonding adhesiveless epoxy rigid-flex, Attaching heat sinks to multilayer PCBs, Dielectric insulators. 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-49N-Multifunctional-Epoxy-Low-Flow-Prepreg.php

Physical Properties	Metric	English	Comments
Density	1.75 g/cc	0.0632 lb/in ³	ASTM D792 Method A
Water Absorption	0.10 %	0.10 %	IPC TM-650 2.6.2.1

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	17.9 GPa	2600 ksi	IPC TM-650 2.4.18.3
Flexural Strength	579 MPa	84000 psi	IPC TM-650 2.4.4
Poissons Ratio	0.17	0.17	ASTM D3039
Peel Strength	1.58 kN/m	9.00 pli	After Thermal Stress; IPC TM-650 2.4.8

Thermal Properties	Metric	English	Comments
CTE, linear	14.0 - 16.0 µm/m-°C	7.78 - 8.89 µin/in-°F	IPC TM-650 2.4.41
CTE, linear, Transverse to Flow	87.0 µm/m-°C	48.3 µin/in-°F	z, below Tg; IPC TM-650 2.4.24
	246 µm/m-°C	137 µin/in-°F	z, above Tg; IPC TM-650 2.4.24
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² -°F	ASTM E1461
Glass Transition Temp, Tg	170 °C	338 °F	DSC; IPC TM-650 2.4.25
Decomposition Temperature	291 °C	556 °F	Onset; IPC TM-650 2.3.41
	302 °C	576 °F	5 percent; IPC TM-650 2.3.41
Flammability, UL94	V-0	V-0	

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	3.30e+12 ohm-cm	3.30e+12 ohm-cm	E24/125; IPC TM-650 2.5.17.1
	2.60e+13 ohm-cm	2.60e+13 ohm-cm	C96/35/90; IPC TM-650 2.5.17.1
Surface Resistance	4.00e+12 ohm	4.00e+12 ohm	E24/125; IPC TM-650 2.5.17.1
	2.90e+13 ohm	2.90e+13 ohm	C96/35/90; IPC TM-650 2.5.17.1
Dielectric Constant	4.4	4.4	IPC TM-650 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	39.4 kV/mm	1000 kV/in	IPC TM-650 2.5.6.2
Dissipation Factor	0.025	0.025	IPC TM-650 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
IPC Delamination - T260 (minutes)	10	IPC TM-650 2.4.24.1
IPC Delamination - T288 (minutes)	0	IPC TM-650 2.4.24.1
IPC Delamination - T300 (minutes)	0	IPC TM-650 2.4.24.1
Z-Axis Expansion (%)	3.1	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