

## Arlon CLTE-P Pre-Preg Bonding Layer

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE

### Material Notes:

Arlon's CLTE-P Prepreg Bonding Layer is a ceramic filled PTFE coated glass stock that is used as a bonding ply for CLTE, CLTE-X or CLTE-AT laminates. CLTE-P is a pre-preg material that consists of woven fiberglass fabric coated with a proprietary resin formulation. The Proprietary resin is thermoplastic, not thermoset in nature. Information provided by Arlon Materials for Electronics (MED).

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Arlon-CLTE-P-Pre-Preg-Bonding-Layer.php](http://www.lookpolymers.com/polymer_Arlon-CLTE-P-Pre-Preg-Bonding-Layer.php)

Physical Properties	Metric	English	Comments
Density	2.38 g/cc	0.0860 lb/in <sup>3</sup>	ASTM D792 Method A
Water Absorption	0.040 %	0.040 %	IPC TM-650 2.6.2.2
Thickness	0.0610 microns	0.00240 mil	After lamination
	0.0813 microns	0.00320 mil	As received
	1.57 microns	0.0620 mil	Thickness of laminate tested
Outgassing - Total Mass Loss	0.00 %	0.00 %	Collected Volatiles; NASA SP-R-0022A
	@Pressure <= 1.33e-10 MPa, Temperature 125 °C	@Pressure <= 1.93e-8 psi, Temperature 257 °F	
	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 %	NASA SP-R-0022A
	@Pressure <= 1.33e-10 MPa, Temperature 125 °C	@Pressure <= 1.93e-8 psi, Temperature 257 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	48.3 MPa	7000 psi	Cross; ASTM D882
	56.5 MPa	8200 psi	Machine; ASTM D882
Modulus of Elasticity	3.19 GPa	462 ksi	Cross; ASTM D638
	3.25 GPa	471 ksi	Machine; ASTM D638
Flexural Modulus	>= 2.59 GPa	>= 375 ksi	ASTM D790
Compressive Modulus	1.55 GPa	225 ksi	ASTM D695

Mechanical Properties	Metric $\mu/m$	English	Comments
-----------------------	----------------	---------	----------

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 $\mu m/m-^{\circ}C$	5.56 $\mu in/in-^{\circ}F$	x direction; IPC TM-650 2.4.24
	@Temperature 0.000 - 100 $^{\circ}C$	@Temperature 32.0 - 212 $^{\circ}F$	
	12.0 $\mu m/m-^{\circ}C$	6.67 $\mu in/in-^{\circ}F$	y direction; IPC TM-650 2.4.24
	@Temperature 0.000 - 100 $^{\circ}C$	@Temperature 32.0 - 212 $^{\circ}F$	
CTE, linear, Transverse to Flow	35.0 $\mu m/m-^{\circ}C$	19.4 $\mu in/in-^{\circ}F$	z direction; IPC TM-650 2.4.24
Thermal Conductivity	0.500 W/m-K	3.47 BTU-in/hr-ft <sup>2</sup> - $^{\circ}F$	ASTM E1225
	@Temperature 100 $^{\circ}C$	@Temperature 212 $^{\circ}F$	
Flammability, UL94	V-0	V-0	Vertical Burn

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.40e+14 ohm-cm	1.40e+14 ohm-cm	C96/35/90; IPC TM-650 2.5.17.1
Surface Resistance	1.30e+12 ohm	1.30e+12 ohm	C96/35/90; IPC TM-650 2.5.17.1
Dielectric Constant	2.94	2.94	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	0.0025	0.0025	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; ASTM D495

Descriptive Properties	Value	Comments
Temperature Coefficient of Dielectric (ppm/ $^{\circ}C$ )	-12	IPC TM-650 2.5.5.5 (-10 - 140 $^{\circ}C$ )

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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