

# APICAL® L50S10PL



APICAL® Polyimide possesses an excellent balance of Physical, thermal, electrical and chemical properties over a wide range of temperature (-269°C to 400°C). More precise thickness control, superior web flatness, plus improved adhesion and excellent dimensional stability are standard features with APICAL Polyimide. This Laminated version of Apical has a thermal stability up to 200°C.

## Characteristics

Improved Bond/Peel Strengths  
Optimal Flexibility  
Excellent Dielectric Properties  
Ideal Elongation

## Applications

Aircraft Wire and Cable  
Traction Equipment  
Down Hole Motors  
Magnet Wire  
Mining Equipment

## Construction

Items	Mils	Microns
Nominal Thickness	1.50	38.1
FP	0.50	12.7
PI	1.00	25.4

## Mechanical Properties

Items	Typical Values	Test Method
Tensile Strength MD, kpsi (MPa)	26 (177)	ASTM D882
Tensile Strength TD, kpsi (MPa)	26 (177)	ASTM D882
Elongation MD (TD), %	103 (103)	ASTM D882

## Thermal Properties

Items	Typical Values	Test Method
Heat Shrinkage MD %	0.12	200°C – 2 hrs
Heat Shrinkage TD %	0.02	200°C – 2 hrs
Heat Seal Strength, FEP-FEP, g/inch (g/cm)	1600 (630)	350°C, 20sec, 20psi

### Electrical Properties

Items	Units	Test Method
Dielectric Strength, kV/mil	5.2	ASTM D149
Dielectric Constant, 1kHz	3.9	ASTM D150
Dissipation Factor, 1kHz	0.0035	ASTM D150
Volume Resistivity, Ohm-cm	>1E+16	ASTM D257

### Physical Properties

Items	Units	Test Method
Water Absorption, %	1.6	IPC-TM650-2.6.2
Coefficient of Humidity Expansion Typical, ppm/%RH	9	HMA
Density, g/cm <sup>3</sup>	1.67	ASTM D1505
Yield, ft <sup>2</sup> /lb (m <sup>2</sup> /kg)	78 (16)	

The data noted in these technical data sheets are given as examples and are not intended to be read as guaranteed values.

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