

APICAL polyimide film possesses an excellent balance of physical, thermal, electrical and chemical properties over a wide range of temperature (-269°C [-452°F] to 400°C [752°F]). More precise thickness control, superior web flatness, plus improved adhesion and excellent dimensional stability are standard features with Apical polyimide films.

Major Applications

- Polyimide base materials for FPC.
- Motor generator insulation.
- Wire and cable insulation.
- Barcode label.
- Pressure sensitive tape.

Thermal Properties

Items	Units	Typical Values	Conditions	Methods
Coefficient of Thermal Expansion	ppm/°C	32	100 to 200°C	TMA

Chemical Properties

Items	Units	Typical Values	Conditions	Methods
Water Absorption	%	2.9	D-24/20	ASTM D-570
Coefficient of Humidity Expansion	ppm/%RH	16	50°C	HMA

Mechanical Properties

Items	Units	Typical Values	Conditions	Methods
Tensile Strength MD & TD	MPa	245	20°C	ASTM D882
Tensile Modulus MD & TD	GPa	3.1	20°C	ASTM D882
Elongation MD & TD	%	115	20°C	ASTM D882

Electrical Properties

Items	Units	Typical Values	Conditions	Methods
Volume Resistivity	Ωcm	>10 ¹⁶	20°C	ASTM D-257
Dielectric Constant	-	3.3	20°C, 1 MHz	IPCTM-650
Dielectric Breakdown Voltage	V/μm	320	20°C, 60Hz	ASTM D-149

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