



800 Martha Street – Pittsburgh, PA 15120
412/462-6300

Polyimide Film

Properties and Applications

Polyimide film is synthesized by polymerizing PMDA and ODA in strong polar solvents through the process of forming film and imine treatment at high temperature, which possesses excellent physical, chemical, and electrical properties, atomic radiation resistant, solvent resistant, low & high temperature resistant, It performs successfully in the wide range of temperature as low as -452F(-269c) and as high as +500F(+260c). Because of its unique excellent properties, it is the most ideal choice in many applications. The following table lists the main technical data of nominal thickness available, for other thickness, please feel free to contact us.

Main Specification

Properties		Unit	Values						
		um_mil	12.5(0.5)	25(1)	40(1.6)	50(2)	75(3)	100(4)	125(5)
Density		g/cm ³	1.42 ±0.2						
Tensile Strength	MD ≥	MPa	150						
	TD ≥	(psi_10 ³)	130						
Elongation ≥		%	35	50	60				
Shrinkage (only for reference, not for supply standard)	150_(302F) 30min ≤	%	1.0						
	400_(752F) 30min ≤		3.0						
Breakdown Strength ≥ (48–62Hz)	Average	MV/m (V/mil)	120 (3000)	190 (4725)	170 (4300)	160 (4000)	145 (3700)	120 (3000)	115 (2900)
	Individual		110 (2800)	180 (4500)	135 (3400)	150 (3800)	120 (3000)	100 (2500)	90 (2300)
Surface Resistance, 200_(392F) ≥		—	1.0×10 ¹³						
Volume Resistance, 200_(392F) ≥		—·m	1.0×10 ¹⁰						
Dielectric Constant 48–62Hz		---	3.5±0.4						
Dielectric Loss Factor 48–62Hz ≤		---	4.0×10 ⁻³						

Application:

1. For wrapping of magnet wire and cable, slot liner insulation, interlayer insulation in Motor, transformer etc.
2. The backing material for Polyimide pressure-sensitive adhesive tape.
3. The substrates or overlay of Flexible Printed Circuits Board (F-PCB).
4. Polyimide tubing.

Product supply:

1. THK Tolerance: +/-10%
2. Core ID: 3" Paper or Plastic standard, others available upon request

Note:

1. Above values are the accumulative typical ones by recognized testing method, but, in order to ensure you to select our products properly, please refer to above specification and test the samples based on your using purpose or feel free to contact our engineers for further and better understanding.
2. The color is only confirmed by samples.