



## DuPont High Performance Materials

High Performance Materials

# Kapton® MT

thermally conductive substrate polyimide film

### Description

Kapton® MT polyimide film is a homogeneous film possessing 3x the thermal conductivity and cut through strength of standard Kapton® HN. Its thermal conductivity properties make it ideal for use in controlling and managing heat in electronic assemblies such as printed circuit boards.

Kapton® MT offers an excellent combination of electrical properties, thermal conductivity and mechanical toughness for its use in electronic and automotive applications.

Kapton® MT has higher modulus than HN; this offers improved strength to the final product. As all Kapton® films, MT retains its properties for extended storage periods in original packaging at temperatures between 4–29°C (40–85°F).

### Applications

Insulation pads (heat sink), heater circuits, power supplies, ceramic board replacement

### Available

MT is sold in 49" maximum width rolls. It is available in 1 mil, 1.5 mil, 2 mil and 3 mil. Other thicknesses can be custom produced. It can also be slit to meet specific requirements.

**Table 1**  
Typical Kapton® MT Properties

	MD	TD	
Thermal conductivity, W/m·K	0.37		
Tensile strength, kpsi (MPa)	27 (186)	25 (172)	
Modulus, kpsi (GPa)	480 (3.3)	450 (3.1)	
Elongation, %	80	90	
Tear strength (initial) mil (g/μm)	1.7 (30)		
Dimensional stability (400°C [752°F]), %	1		
Dielectric strength, V/mil (V/μm)			
100 MT	6,000 (236)		
300 MT	5,000 (197)		
Dielectric constant (25°C [77°F])	4.2		
Volume resistivity, ohm·sq	>10 <sup>14</sup>		
Cut through, lb	40		
Fold endurance	200,000 cycles		
Permeability, cc/m <sup>2</sup> /day		<u>100 MT</u>	<u>200 MT</u>
	O <sub>2</sub>	443	226
	WVTR	95	85
	N <sub>2</sub>	3	2

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**Caution:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102.

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