



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	5,400 (212)		
300 MT	4,500 (177)		
Dielectric constant (25°C [77°F])	4.2		
Volume resistivity, ohm·sq	>10 ¹⁴		
Cut through, lb	40		
Fold endurance	200,000 cycles		
Permeability, cc/m ² /day		<u>100 MT</u>	<u>200 MT</u>
	O ₂	443	226
	WVTR	95	85
	N ₂	3	2

United States

DuPont High Performance Materials
P.O. Box 89
Route 23 South and DuPont Road
Circleville, OH 43113
Ordering Information:
800-967-5607
Product Information:
800-237-4357
Fax: 800-879-4481

Europe

DuPont de Nemours
(Luxembourg) S.A.
Rue Général Patton
L-2984 Luxembourg
Grand Duchy of Luxembourg
352-3666-5575
Fax: 352-3666-5000

Asia Pacific

Japan
DuPont Kabushiki Katsha
Arco Tower
8-1, Shimomeguro 1-chome
Meguro-ku, Tokyo 153
Japan
81-3-5434-6139
Fax: 81-3-5434-6193

The information given herein is based on data believed to be reliable, but the DuPont Company makes no warranties express or implied as to its accuracy and assumes no liability arising out of its use by others. This publication is not to be taken as a license to operate under, or recommendation to infringe, any patent.

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.

Copyright © 1999 E. I. du Pont de Nemours and Company. All rights reserved.

