



DUPONT™ KAPTON® 120FWN616B

DESCRIPTION

Kapton® 120FWN616B is a multi-layer composite film. This composite film offers the superior balance of physical, electrical, thermal, and chemical resistant properties found in Kapton® polyimide film and Teflon® fluoropolymer materials. Kapton® 120FWN616B is heat fusible to copper and itself enabling reliable and thin spiral wrapped electrical insulation. This capability makes it ideal as an electrical insulation material for copper conductors used in demanding magnet wire applications where good adhesion and dielectric properties are desired.

Kapton® 120FWN616B composite construction consists of a layer 25 micron thick polyimide film core between two 4 micron thick layers of improved high temperature Teflon® fluoropolymer adhesive. The final, balanced construction is nominally 33 microns thick.

CHARACTERISTICS

- Heat fusible adhesive
- High dielectric strength
- Double side coated
- Thin, light weight

APPLICATIONS

- Magnet wire
- Traction motors: rail, auto, mining
- Industrial motor insulation
- Wind, hydro generators
- High temperature
- High reliability

Typical Properties

Property	Unit	Typical Value	Test Method
Thickness	mil	1.3	ASTM D-374
	µm	33	
Tensile Strength	kpsi	30	ASTM D-882
	MPa	207	
Elongation	%	92	ASTM D-882
280 °C Heat Seal Strength	gms/in	1200	DuPont Test Method
	gms/cm	472	
Yield	ft ² /lb	97.3	-
	m ² /kg	19.9	
Density	g/cc	1.52	ASTM D-1505
Dielectric Strength	V/mil	6400	ASTM D-149
	kV/mm	252	
Dielectric Constant@ 1Khz	-	2.6	ASTM D-150
Dissipation Factor	-	0.001	ASTM D-150
Volume Resistivity	(Ohm-cm)	>10 ¹⁶	ASTM D-257
Results below - component material data only			
Melt Point (polyimide)	°C	None	ASTM E-794
Melt Point (fluoropolymer)	°C	> 257	ASTM E-794
Flammability (polyimide)	-	94V-0	UL Test Method
Limiting Oxygen Index -LOI (polyimide)	(%)	>35	ASTM D-2863

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This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentations. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in end-use conditions, DuPont makes no warranties, and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102-4.

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