

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 FEP fluoropolymer materials. Kapton® 120FWN616B is heat fusible to copper and to 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 FEP 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

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Table 1. Typical Properties of DuPont™ Kapton® 120FWN616B

Property	Units	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)	>1016	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



For more information on DuPont™ Kapton® polyimide films or other DuPont products, please visit our website.

kapton.com

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