

DuPont™ Kapton® 150FCRC019

Product Description

DuPont™ Kapton® corona resistant film is a state of the art polyimide film that withstands the damaging effects of corona discharge. The corona resistance provides improved service life and operational efficiencies versus conventional insulation materials.

Kapton® 150FCRC019 is a composite film consisting of Kapton® 100CRC corona resistant polyimide film and a heat fusible FEP fluoropolymer film. In addition to the corona resistant properties, Kapton® FCRC offers excellent, physical, electrical, thermal, and chemical resistant characteristics expected with Kapton® polyimide films.

Kapton® 150FCRC019 has been developed for use as a magnet wire insulation in rail traction, industrial motors and generators where there is a need for enhanced insulation life under partial discharge environments.

Kapton® FCRC may also be used in other electrically insulating applications where partial discharge may occur.

Characteristics

- Corona resistant film
- Heat fusible adhesive
- High dielectric strength
- Reduced thickness versus mica laminates

Applications

- Magnet wire
- Traction motors: rail, auto, mining
- Industrial motor insulation
- Wind, hydro generators
- ESP motors
- High temperature
- High reliability
- Aerospace and specialty wires

Table 1 - Typical Physical Properties of DuPont™ Kapton® 150FCRC019 Polyimide Film

Property	Unit	Typical Value	Test Method
Thickness	mil	1.5	ASTM D374
	µm	38	
Tensile Strength	kpsi	25	ASTM D882
	MPa	172	
Elongation	%	77	ASTM D882
Tensile Modulus	kpsi	380	ASTM D882
	GPa	2.6	
Dielectric Strength	V/mil	4200	ASTM D149
	kV/mm	165	
315 °C Heat Seal Strength	gms/in	1100	DuPont Test Method
	gms/cm	433	
Yield	ft ² /lb	78	-
	m ² /kg	16	
Density	g/cc	1.65	ASTM D1505
Results Below - polyimide film data only			
Dielectric Constant @ 1 kHz	-	3.4	ASTM D150
Dissipation Factor @ 1 kHz	-	0.002	ASTM D150
Volume Resistivity	ohm-cm	>10 ¹⁶	ASTM D257
UL Electrical RTI	°C	240	UL 746B
UL Mechanical RTI	°C	200	UL 746B
Flammability	UL-94	V-0	UL Test Method



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

kapton.com

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. It may be subject to revision as new knowledge and experience becomes available. This information is not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. Since we cannot anticipate all variations in end-use and disposal conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information. It is intended for use by persons having technical skill, at their own discretion and risk. 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-50102-5 and "DuPont Policy Regarding Medical Applications" H-50103-5.

DuPont™, the DuPont Oval Logo, and Kapton® are trademarks or registered trademarks of DuPont or its affiliates. Copyright © 2019 DuPont de Nemours Inc. K-29879 (04/19)