



DUPONT™ KAPTON® 100CRC

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® 100CRC being a homogeneous film provides improved service life and operational efficiencies versus conventional insulation materials. In addition to the corona resistant properties, Kapton® CRC offers excellent, physical, electrical, thermal, and chemical resistant characteristics expected with Kapton® polyimide films.

Kapton® CRC polyimide film has been developed for use as an electrically insulating material for high voltage environments where the potential for corona discharge is present. Kapton® CRC is typically used in industrial motor and generator applications as magnet wire, turn to turn strand, coil, slot liner and ground insulation materials. It has also been used to form laminates with other materials, such as DuPont™ Nomex® paper or mica insulations, to provide a tailored electrical insulation property.

APPLICATIONS

- AC Inverter Duty Motors
- Rail, Automotive Traction Motors
- Hydro, Wind Power Generators
- Transformers

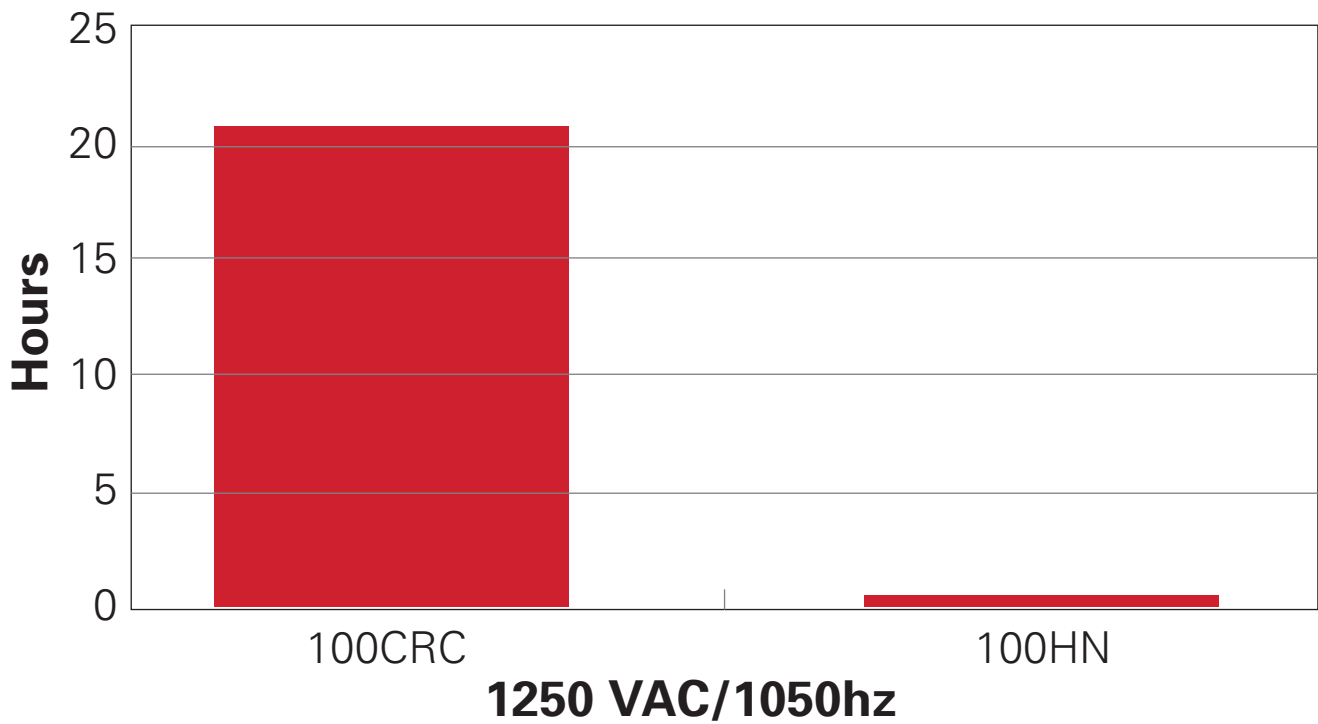
Table 1—Typical Physical Properties of DuPont™ Kapton® 100CRC Polyimide Film

Property	Unit	Typical Value	Test Method
Thickness	mil	1	ASTM D374
	µm	25.4	
Tensile Strength	kpsi	34	ASTM D882
	MPa	227	
Elongation	%	80	ASTM D882
Tensile Modulus	kpsi	500	ASTM D882
	GPa	3.48	
Dielectric Strength	V/mil	7000	ASTM D149
	kV/mm	276	
Dielectric Constant @ 1 kHz	—	3.4	ASTM D150
Dissipation Factor @ 1 kHz	—	0.002	ASTM D150
Volume Resistivity	ohm-cm	>10 ¹⁶	ASTM D257
Yield	ft ² /lb	128	—
	m ² /kg	26	
Density	g/cc	1.48	ASTM D1505
UL Electrical RTI	°C	240	UL 746B
UL Mechanical RTI	°C	200	UL 746B
Flammability	UL-94	V-0	UL Test Method



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Voltage Endurance of Film Subject to Partial Discharge Hours to Failure - ASTM D2275 - 1/2" Diameter Electrodes, 5th out of 9
Figure 1–Comparison of Voltage Endurance, DuPont™ Kapton® 100CRC to DuPont™ Kapton® 100HN



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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-50102-5.

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