DuPont™ Kapton® FCR will conform tightly to shaped conductors, providing an even distribution of insulation, even on the edges. This eliminates the thinning of the insulation on the edges as is commonly found on enameled wire.

For Improved Motor and Generator Performance

Kapton® FCR is a state-of-the-art wire insulation that will withstand corona discharge while delivering improved long term performance, cost effectively.

Motors and generators insulated with Kapton® FCR can deliver improved service life and operational efficiency versus conventional insulation. Kapton® FCR can handle many of the factors that lead to early failure, such as thermal upsets and partial discharge.

As energy costs increase, improved motor insulation efficiency can provide a direct payoff to the motor or generator operator. The cost of an early failure can far outweigh the cost of using the best available wire insulation in manufacturing or rewinding the motor.

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Large Industrial Motors: American Electric Power has commissioned the rebuilding of 13.2kV fan motors with wire insulated with Kapton® FCR. Kapton® FCR has delivered reduced life cycle costs and improved life expectancy to AEP.

Traction Motors: The European rail industry adopted Kapton® FCR in the mid-1990’s to improve the efficiency and durability of AC traction motors on its high-speed locomotives. This system has significantly outperformed traditional insulation systems.

Generators: The Smith Mountain hydroelectric facility near Roanoke Virginia decided to update the capacity of one of its severe duty, 101,500 HP, 69MVA motor-generators. Because of its higher corona resistance & dielectric performance Kapton® FCR was chosen to replace the conventional insulation. The superior, thinner strand insulation provides improved efficiency and capacity and excellent long-term reliability.

KAPTON® FCR HAS PROVEN TO BE THE INSULATION OF CHOICE FOR A WIDE RANGE OF APPLICATIONS.

- Reduces life cycle cost
- Provides increased durability and longer life
- Allows use of thinner insulation where space is at a premium
- Withstands continuous exposure to temperatures as high as 240°C
- Forms strong bond to magnet wire
- Delivers superior corona resistance under extreme conditions

Applications:
- Large industrial motors
- Traction motors
- Generators

Table 1. In pulse endurance testing, Kapton® FCR film showed superior performance when compared with other insulations.

If you are working with tight clearances, the extremely high insulation resistance provided by Kapton® allows the use of a thinner insulation and provides the space needed for a successful rewind.
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(Coils Manufactured by National Electric Coils)
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