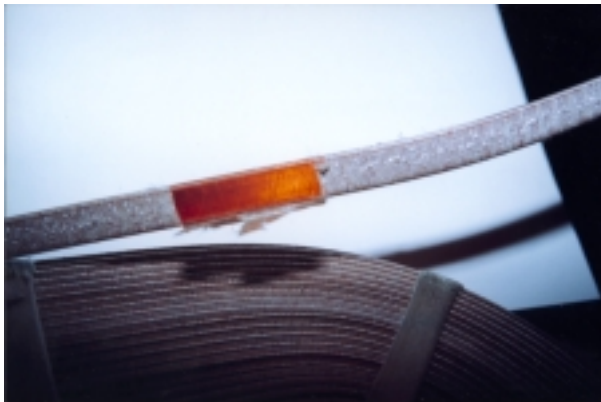




# Kapton®

polyimide film

## DuPont Kapton® Polyimide Film Goes to Extremes in South Africa



### Description/Application

Few conditions are as severe as those encountered by South Africa's mining industry in the production of molten steel. To ensure uniform dispersion of impurities, "stirrer motors" are used in each continuous casting line as molten steel passes through the bore. This creates extreme conditions at very high temperatures.

DuPont Films customer P&H Minepro uses heat-sealable Kapton® 150 FWR019 polyimide film on conductors in stirrer motors it manufactures for the mining industry.

### DuPont Films Customer

P&H Minepro, Maraisburg, South Africa  
Phone: 27 11 839 2713

### DuPont Films Distributor

Intech, Johannesburg, South Africa  
Phone: 27 11 613 6731

### Benefits Gained

**Water resistance.** Stirrer motor coils are immersed in force-circulated water to maintain coolness. The entire system must be waterproof. P&H Minepro found Kapton® 150 FWR019 is particularly well suited for use in environments where continuous water exposure is a concern.

**Temperature resistance.** The high water temperatures and aggressive cooling conditions of this application require insulation material that will stand up to the heat. Kapton® FWR retains its physical, chemical, electrical, and mechanical properties over a wide temperature range.

**Chemical resistance.** Because pure distilled water is not freely available, P&H required an insulating material with strong chemical resistance. It found Kapton® FWR ideally suited for its closed motor system.

**Space savings.** Conductor wires are large and rectangular and need tough insulation to meet the rigors of forming and insertion in the stirrer manufacturing process. By using Kapton® FWR, P&H Minepro found it could devote less space to insulation material, allowing more room for water flow.

### Materials Chosen and Why

Kapton® FWR019 is 25 µm (1 mil) laminated to 12.4 µm (0.5 mil) Teflon® FEP fluoropolymer resin. A fiberglass coating is applied to the Kapton® to enhance adherence of the impregnating resin. P&H Minepro reports that the water resistance, performance at high temperatures, and space savings of Kapton® polyimide film are helping extend the service life of its products.

### DuPont Films

Call: (800) 237-4357 or your local representative.

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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.

