

# DuPont™ Kapton® FPC PI Film

**Grade:** DuPont™ Kapton® FPC

**Formula:** PI

**Thickness:** 0.05mm

**Length 1:** 10mm

**Length 2:** 10mm

**CAS Number:** 60842-76-4

**UOM Code:** 267-430-88

**SKU:** 1000113436-group

**Product Code:** IM30-FM-000105

## Material Properties for Polymers

### Chemical Resistance

Element	Value
Acids - concentrated	Poor
Acids - dilute	Fair
Alcohols	Poor
Alkalis	Poor
Aromatic hydrocarbons	Good
Greases and Oils	Good
Halogenated Hydrocarbons	Good
Halogens	Fair
Ketones	Good

### Mechanical Properties

Element	Value
Coefficient of friction	0.42
Hardness - Rockwell	E52-99
Elongation at break( % )	Aug-70
Tensile modulus( GPa )	02-Mar
Izod impact strength( J m <sup>21</sup> )	80
Tensile strength( MPa )	70-150

## Electrical Properties

Element	Value
Dielectric constant @ 1MHz	3.4
Dissipation factor @ 1kHz	0.0018
Dielectric strength( kV mm <sup>-1</sup> )	22
Surface resistivity( Ohm/sq )	10 <sup>12</sup>
Volume resistivity( Ohmcm )	10 <sup>12</sup>

## Physical Properties

Element	Value
Flammability	V0
Radiation resistance	Good
Refractive index	1.66
Resistance to Ultra-violet	Poor
Limiting oxygen index( % )	53
Water absorption - over 24 hours( % )	0.2-2.9
Density( gcm <sup>-3</sup> )	1.42

## Thermal Properties

Element	Value
Heat-deflection temperature - 1.8MPa( C )	360
Lower working temperature( C )	-270
Upper working temperature( C )	250-320
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	1090
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	0.1-0.35@23°C
Coefficient of thermal expansion( x10 <sup>-6</sup> K <sup>-1</sup> )	30-60