PET Film

PET film provides tensile strength, chemical resistance, optical clarity, and dimensional stability for flexible circuits, display films, dielectric layers, and research into nanocomposites and high?performance packaging.
SKU: 1000000356-group
Product Code: ES30-FM-000201

Material Properties for Polymers

Chemical Resistance

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

Mechanical Properties

Element	Value
Coefficient of friction	0.2-0.4
Hardness - Rockwell	M94-101
Poisson's ratio	0.37-0.44
Tensile modulus(GPa)	02-Apr
Izod impact strength(J m?¹)	13-35
Tensile strength(MPa)	80, for biax film 190-260

Electrical Properties

Element	Value
Dielectric constant @1MHz	3
Dissipation factor @ 1kHz	0.002

Element	Value
Dielectric strength(kV mm?¹)	17
Surface resistivity(Ohm/sq)	10^{13}
Volume resistivity(Ohmcm)	>10^{1}?

Physical Properties

Element	Value
Flammability	HB
Radiation resistance	Good
Refractive index	1.58-1.64
Resistance to Ultra-violet	Fair?
Limiting oxygen index(%)	21
Water absorption - equilibrium(%)	0.7
Water absorption - over 24 hours(%)	0.1
Density(gcm?³)	1.3-1.4

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	115
Heat-deflection temperature - 1.8MPa(C)	80
Lower working temperature(C)	20
Upper working temperature(C)	115-170
Specific heat(J K?¹ kg?¹)	1200-1350
Thermal conductivity(W m?¹ K?¹)	0.15-0.4@23°C
Coefficient of thermal expansion(x10?? K?¹)	20-80