

PET Filament

Formula: Polyester, PET, PETP

Diameter: 0.5mm

Length: 200m

Colour: White

CAS Number: 25038-59-9

UOM Code: 104-188-35

SKU: 1000017455-group

Product Code: ES30-MT-000150

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 ²¹)	13-35
Tensile strength(MPa)	80, for biax film 190-260

Electrical Properties

Element	Value
Dielectric constant @1MHz	3
Dissipation factor @ 1kHz	0.002
Dielectric strength(kV mm ⁻¹)	17
Surface resistivity(Ohm/sq)	10 ¹³
Volume resistivity(Ohmcm)	>10 ¹²

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 ⁻⁵ K ⁻¹)	20-80