

Homopolymer PP Rod

Grade: Homopolymer

Formula: PP

Diameter: 8mm

Length: 10mm

CAS Number: 9003-07-0

UOM Code: 281-952-20

SKU: 1000119009-group

Product Code: PP30-RD-000107

Material Properties for Polymers

Chemical Resistance

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

Mechanical Properties

Element	Value
Coefficient of friction	0.1-0.3
Hardness - Rockwell	R80-100
Elongation at break(%)	150-300, for biax film >50
Tensile modulus(GPa)	0.9-1.5, for biax film 2.2-4.2
Izod impact strength(J m ²¹)	20-100
Abrasive resistance - ASTM D1044(mg/1000 cycles)	13-16
Tensile strength(MPa)	25-40, for biax film 130-300,

Electrical Properties

Element	Value
Dielectric constant @ 1MHz	2.2-2.6
Dissipation factor @ 1MHz	0.0003-0.0005
Dielectric strength(kV mm ⁻¹)	30-40
Surface resistivity(Ohm/sq)	10 ¹³
Volume resistivity(Ohmcm)	10 ¹² -10 ¹⁴

Physical Properties

Element	Value
Flammability	HB
Radiation resistance	Fair
Refractive index	1.49
Resistance to Ultra-violet	Poor
Limiting oxygen index(%)	18
Water absorption - equilibrium(%)	0.03
Density(gcm ⁻³)	0.9

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	100-105
Heat-deflection temperature - 1.8MPa(C)	60-65
Lower working temperature(C)	50
Upper working temperature(C)	90-120
Specific heat(J K ⁻¹ kg ⁻¹)	1700-1900
Thermal conductivity(W m ⁻¹ K ⁻¹)	0.1-0.22@23°C
Coefficient of thermal expansion(x10 ⁻⁴ K ⁻¹)	100-180