

# FEP Copolymer Rod

**Formula:** FEP

**Diameter:** 9.5mm

**Length:** 100mm

**CAS Number:** 25067-11-2

**UOM Code:** 030-841-28

**SKU:** 1000003906-group

**Product Code:** FP34-RD-000110

## Material Properties for Polymers

### Chemical Resistance

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

### Mechanical Properties

Element	Value
Coefficient of friction	0.27-0.67
Hardness - Rockwell	R25-45, 60 Shore D
Poisson's ratio	0.48
Elongation at break( % )	150-300
Tensile modulus( GPa )	0.5-0.6
Izod impact strength( J m <sup>2</sup> )	999999No Break
Tensile strength( MPa )	14-30

### Electrical Properties

<b>Element</b>	<b>Value</b>
Dielectric constant @1MHz	2.1
Dissipation factor @ 1MHz	0.0007
Dielectric strength( kV mm <sup>-1</sup> )	20@3.2mm
Surface resistivity( Ohm/sq )	10 <sup>12</sup>
Volume resistivity( Ohmcm )	10 <sup>12</sup>

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Flammability	V0
Radiation resistance	Poor
Refractive index	1.344
Resistance to Ultra-violet	Excellent
Limiting oxygen index( % )	95
Water absorption( % )	0.01
Density( gcm <sup>-3</sup> )	2.15

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Heat-deflection temperature - 0.45MPa( C )	50
Heat-deflection temperature - 1.8MPa( C )	70
Lower working temperature( C )	-250
Upper working temperature( C )	150-200
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	1100
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	0.19-0.24@23°C
Coefficient of thermal expansion( x10 <sup>-4</sup> K <sup>-1</sup> )	83-104