

# POLYETHER ETHER KETONE (PEEK)

**Chemical Name:** Polyether ether ketone

**Abbreviation:** PEEK

**Properties (Colour):** Colourless

**Properties (Form):** Rod, Plate

**Machining:** Excellent

**Types:** Glass Filled, Carbon Filled, PTFE Filled

**Chemical Resistance:** Excellent long-term chemical resistance

## KEY BENEFITS

- Excellent mechanical strength
- Great dimensional stability
- Hydrolysis resistance
- High temperature resistance
- Proven performance in challenging environments such as aerospace, oil & gas
- Good chemical resistance
- Easy to machine and fabricate
- Good electrical insulator
- Very low smoke and toxic gas emissions when exposed to flame

MECHANICAL PROPERTIES	
Density $\rho$ (g/cm <sup>3</sup> )	1.32
Tensile Strength at Yield $s$ (Mpa)	92
Elongation at Break %	50
Modulus of Elasticity Tensile $E_t$ (Mpa)	3600
Modulus of Elasticity Bending $E_b$ (Mpa)	4100
Impact Strength kJ/mm <sup>2</sup>	NO BREAK
Hardness Ball Indent	-
Creep 1 % after 1000hr MPa	30
Coefficient of friction against Steel $\mu$	0.3-0.38

THERMAL PROPERTIES	
Melting Point °C	334
Glass Transition Temperature °C	143
Thermal Conductivity W/M°C	0.25
Specific Heat J/(g.K)	0.32
Coefficient of Linear Expansion a 10-6 .°K	47
Safe Working Temp. Short Term °C	300
Safe Working Temp. Continuous °C	250
Minimum Working Temperature °C	-

ELECTRICAL PROPERTIES	
Dielectric Constant $\hat{1}$ 106 Hz	3.2
Dielectric loss Factor tand 106 Hz	0.001
Volume Resistance W.cm	$4.9 \times 10^{16}$
Surface Resistance W	-
Dielectric Strength kV/mm	20
Moisture Absorption % (at 50%RH)	0.1

\*Whilst all care has been taken to provide accurate & up to date information, we cannot provide legal certification of properties. We recommend that this information be used as a design guide only. Actual testing should be undertaken to confirm data if certification is required.\*

**If you need further information relating to the above data or require additional information please contact our team, we're here to help.**



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