

POLYETHER ETHER KETONE (PEEK)

SPECIFICATIONS SHEET

DETAILS

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
- Good chemical resistance
- Easy to machine and fabricate
- Proven performance in challenging environments such as aerospace, oil & gas
- Good electrical insulator
- Very low smoke and toxic gas emissions when exposed to flame

MECHANICAL PROPERTIES

Density ρ (g/cm ³)	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 ²	NO BREAK
Hardness Ball Indent	-
Creep 1 % after 1000hr MPa	30
Coefficient of friction against Steel μ	0.3-0.38

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(CONT.)

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 α 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 $\hat{\epsilon}$ 106 Hz	3.2
Dielectric loss Factor tand 106 Hz	0.001
Volume Resistance W.cm	4.9x10 ¹⁵
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.