

PEEK is a high-performance thermoplastic that keeps its strength, stiffness and wear resistance at continuous temperatures up to 250°C. It resists most chemicals, steam and hydrolysis, and replaces metal in demanding oil and gas, chemical and industrial applications.

Specification

Material	PEEK unfilled; glass-filled (GF30), carbon-filled (CF30) and bearing grades on request
Standard Colours	Natural (beige), black
Forms	Sheets, round rods, tubes; machined parts to drawing
Sheet Thickness	Approx. 5 mm to 100 mm
Rod Diameter	Approx. 6 mm to 200 mm
Standard Lengths	Rods 1 m / 3 m; sheets 610 x 1000 mm, or cut to size

Material Properties (typical values)

Property	Typical Value
Density	1.30 - 1.32 g/cm³
Tensile strength	95 - 110 MPa
Elongation at break	20 - 40%
Tensile modulus	3,600 - 4,000 MPa
Hardness	Shore D 85 - 88
Notched impact (Charpy)	approx. 3.5 - 4 kJ/m²
Melting point / glass transition	approx. 343°C / 143°C
Service temperature	-60°C to +250°C continuous
Water absorption (saturation)	approx. 0.5%
Coefficient of friction	0.30 - 0.40 (dry on steel)
Flammability	UL 94 V-0

Typical Applications

Valve seats and seals, back-up rings, compressor and pump parts, bearings and bushes, oil and gas components, semiconductor and electrical parts, steam-sterilised parts.

Selection Note

Carbon-filled and bearing grades give lower friction and higher wear resistance for dynamic seals and bearings.

How to Order

Send the material, grade, colour, form, dimensions (thickness / diameter, width, length) and quantity, or a drawing for machined parts, to Diode Trading EST at www.diode.sa or +966 51 083 8213. Material test certificates are available on request.

Notice: Values are typical and indicative, based on common industry grades. Exact grade, size, tolerance and performance are confirmed on quotation and against the supplier or manufacturer data and material test certificate for each batch. This sheet is not a warranty. Contact Diode Trading EST to confirm availability and specification for your application.