

Multiplast PEEK black

Multiplast PEEK black, Polyether ether ketone, is a high temperature-resistant thermoplastics with unusual characteristics. The high strength of the semi-crystalline aromatic polymers is maintained even at high temperatures.

Multiplast PEEK has:

- Very good impact strength a low temperatures
- High mechanical fatigue strength
- Very low tendency to creep
- Good sliding properties
- Good wear resistance
- Long-term service temperatures up to +260°C
- Excellent mechanical properties (even at high temperatures)

Properties	Units		
Modulus of elasticity (tensile test)	MPa	4100	
Tensile strength	MPa	100	
Tensile strength at yield	MPa	100	
Elongation at yield	%	3	
Elongation at break	%	3	
Modulus of elasticity (flexural test)	MPa	4100	
Flexural strength	MPa	171	
Compression modulus	MPa	3300	
Compressive strength (1% / 2%)	MPa	22 / 41	
Impact strength (Charpy)	kJ / m ²	75	
Notched impact strength (Charpy)	kJ / m ²	-	
Ball indentation hardness	MPa	253	
Glass transition temperature	°C	151	
Melting temperature	°C	341	
Service temperature	short term	°C	300
	long term	°C	260
Thermal expansion	23 °C – 60 °C	10 ⁻⁵ K ⁻¹	5
	23 °C – 100 °C	10 ⁻⁵ K ⁻¹	5
Specific heat	J / (g x K)		1,1
Thermal conductivity	W / m K		0,30

Properties	Units	
Specific surface resistance	Ω	10^{12}
Specific volume resistance	$\Omega \times \text{cm}$	-
Dielectric strength	kV / mm	-
Resistance to tracking (CTI)	V	-
Water absorption 24 h / 96 h (@ 23°C)	%	0,02 / 0,03
Resistance to hot water / bases	-	Good resistance
Resistance to weathering	-	Poor resistance
Flammability	UL94	V0
Density	g/cm ³	1,31
Colour	-	Black / Opaque

Availability:

Sheet: Size: 620 x 3000 mm (smaller sizes are possible)
 Thickness: 20 mm

Rod: Length: 3000 mm (shorter lengths are possible)
 Diameter 16, 20, 25, 30, 32, 40 and 50 mm

Cut pieces: On request

Parts: Finished products according to drawing