

Multiplast PEEK natural

Multiplast PEEK natural, 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 natural has:

- Very good impact strength at 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	4200	
Tensile strength	MPa	116	
Tensile strength at yield	MPa	116	
Elongation at yield	%	5	
Elongation at break	%	15	
Modulus of elasticity (flexural test)	MPa	4200	
Flexural strength	MPa	175	
Compression modulus	MPa	3400	
Compressive strength (1% / 2%)	MPa	23 / 43	
Impact strength (Charpy)	kJ / m ²	-	
Notched impact strength (Charpy)	kJ / m ²	4	
Ball indentation hardness	MPa	253	
Glass transition temperature	°C	150	
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	0,27	

Properties	Units	
Specific surface resistance	Ω	10 ¹⁵
Specific volume resistance	$\Omega \times \text{cm}$	10 ¹⁵
Dielectric strength	kV / mm	73
Resistance to tracking (CTI)	V	125
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	-	Beige / Opaque

Availability:

Sheet:	Size:	500 x 3000 mm (smaller sizes are possible)
	Thickness:	5 – 80 mm
	Size:	620 x 3000 mm (smaller sizes are possible)
	Thickness:	10 – 50 mm
	Size:	1000 x 2000 mm (smaller sizes are possible)
	Thickness:	20 - 60 mm
	Size:	300 x 3000 mm (smaller sizes are possible)
	Thickness:	100 mm
	Size:	620 x 1000 mm (smaller sizes are possible)
	Thickness:	120 and 150 mm
Rod:	Length:	3000 mm (shorter lengths are possible)
	Diameter	5 - 165 mm
	Length:	1000 mm (shorter lengths are possible)
		180 and 200 mm
Tube:	Length:	3000 mm (shorter lengths are possible)
	Minimum Inside diameter:	Ø25 mm
	Maximum Outside diameter:	Ø200 mm
Cut pieces:	On request	
Parts:	Finished products according to drawing	