



Datasheet

ENGLISH

RS PRO

PEEK Unfilled Natural Rod 8mm Diameter x 300mm long

Stock No: 514-776



Chemical designation	PEEK (Polyetheretherketone)
Colour	Beige
Density	1.31 g/cm ³
Filler(s)	None

Technical Specifications:

Mechanical Properties	Parameter	Value	Unit	Standard/Norm
Modulus of elasticity (tensile test)	1mm/min	4200	MPa	DIN EN ISO 527-2
Tensile strength	50mm/min	116	MPa	DIN EN ISO 527-2
Tensile strength at yield	50mm/min	116	MPa	DIN EN ISO 527-2
Elongation at yield	50mm/min	5	%	DIN EN ISO 527-2
Elongation at break	50mm/min	15	%	DIN EN ISO 527-2
Flexural strength	2mm/min, 10N	175	MPa	DIN EN ISO 178
Modulus of elasticity (flexural test)	2mm/min, 10N	4200	MPa	DIN EN ISO 178
Compressive strength	1% / 2%; 5mm/min, 10N	23/43/102	MPa	EN ISO 604
Compression modulus	5mm/min, 10N	3400	MPa	EN ISO 604
Impact strength (Charpy)	max. 7.5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU
Notched impact strength (Charpy)	max. 7.5J	4	kJ/m ²	DIN EN ISO 179-1eA
Ball indentation hardness		253	MPa	ISO 2039-1

Thermal Properties	Parameter	Value	Unit	Standard/Norm
Glass transition temperature		150	°C	DIN 53765
Melting temperature		341	°C	DIN 53765
Heat distortion temperature	HDT, Method A	162	°C	ISO-R 75 Method A
Service temperature	Short term	300	°C	
Service temperature	Long term	260	°C	
Thermal expansion (CLTE)	23-60°C, long	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Thermal expansion (CLTE)	23-100°C, long	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Thermal expansion (CLTE)	100-150°C, long	7	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
Specific heat		1.1	J/(g*K)	ISO 22007-4:2008
Thermal conductivity		0.27	W/(K*m)	ISO 22007-4:2008

Electrical Properties	Parameter	Value	Unit	Standard/Norm
Specific surface resistance	Silver electrode, 23°C, 12% r.h.	10 ¹⁵	W	DIN IEC 60093
Specific volume resistance	Silver electrode, 23°C, 12% r.h.	10 ¹⁵	W*cm	DIN IEC 60093
Dielectric strength	23°C, 50% r.h.	73	kV/mm	ISO 60243-1
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	125	V	DIN EN 60112

Other Properties	Parameter	Value	Unit	Standard/Norm
Water absorption	24h / 96h (23 °C)	0.02 / 0.03	%	DIN EN ISO 62
Resistance to hot water / bases		+		
Resistance to weathering		-		
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10



Features & Benefits:

- **Good heat deflection temperature**
- **Good machinability**
- **Inherent flame retardant**
- **Resistant against high energy radiation**
- **Good slide and wear properties**
- **High creep resistance**
- **Very good chemical resistance**
- **Hydrolysis and superheated steam resistant**

Compliances:

- **ISO 10993**
- **ROHS**
- **REACH**
- **FDA**
- **EU 10/2011**
- **Aerospace approved**