

## PEEK

The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN EN ISO / ASTM	
<b>Mechanical</b>			
Density	g/cm <sup>3</sup>	527 / D 792	1.32
Tensile strength at yield	MPa	527 / D 638	95
Tensile strength at break	MPa	527 / D 638	
Elongation at break	%	527 / D 638	25
Modulus of elasticity in tension	MPa	527 / D 638	3000
Modulus of elasticity in flexure	MPa	178 / D 790	4100
Hardness Rockwell	MPa	2039 / 1	M99
Impact strength	kJ/m <sup>2</sup>	179 / D 256	no br.
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs	MPa		
Coefficient of friction against hardened and ground steel p = 0.05 N/mm <sup>2</sup> , v = 0.6 m/s	-		0.3 - 0.38
Wear conditions as above	µm/km		
<b>Thermal</b>			
Crystalline melting point	°C	DIN 53 736	343
Glass transition temperature	°C	DIN 53 736	143
Heat distortion temperature Method A	°C	R 75	140
Method B	°C	R 75	182
Max. service temperature short term	°C		300
long term	°C		280
Coefficient of thermal conductivity	W/(m K)		0.25
Specific heat	J/(g K)		0.32
Coefficient of thermal expansion	10 <sup>-5</sup> /K	DIN 53 483 / D 696	5.0
<b>Electrical</b>			
Dielectric constant at 10 <sup>5</sup> Hz		DIN 53 483	3.2 - 3.3
Dielectric loss factor at 10 <sup>5</sup> Hz		DIN 53 483	0.001 - 0.004
Specific volume resistance	Ω cm	DIN 60093	>10 <sup>16</sup>
Surface resistance	Ω	DIN 60093	>10 <sup>15</sup>
Dielectric strength 1 mm	kV/mm	ASTM 149	20
Tracking resistance		53 480	
<b>Miscellaneous</b>			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	0.1
Water absorption at saturation at 23°C	%	62	0.5
Resistance to hot water, washing soda			resistant
Flammability according to UL standard 94			V0
Resistance to weathering			not resistant