









Material Data Sheet











PEEK-mod

Chemical Designation :	Polyetheretherketone
DIN-Abbreviation:	PEEK
Colours, fillers:	black, carbon fibre + PTFE + graphite

Main features

-  high thermal and mechanical capacity
 -  easily machined
 -  very creep resistant
 -  resistant to hydrolysis and superheated steam
 -  very abrasion resistant
 -  flame retardent according to UL94 V-0
 -  good chemical resistance
 -  excellent sliding properties
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Preferred Fields

-  mechanical engineering
 -  transport and conveyor technology
 -  packaging and paper processing machinery
 -  chemical engineering
 -  maintenance engineering
 -  automotive engineering
 -  textile machinery
 -  precision engineering
 -  aircraft and aerospace industries
 -  pumps and instrument manufacture
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Applications

Friction bearings, static/dynamic high loaded parts, gears, slide shoes, ball valve seats, chain bearings, pump housings, control pistons, pump impellers

Properties

Material Data Sheet	PEEK-mod		
Mechanical	dry / moist		standard
Tensile strength at break	130	MPa	DIN EN ISO 527
Elongation at break	1,5	%	DIN EN ISO 527
Modulus of elasticity in tension	9500	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test	8100	MPa	DIN EN ISO 178
Hardness	208		DIN 53 456 (Kugeldruckhärte, 961N)
Impact strength 23° C (Charpy)	30	KJ/m ²	DIN EN ISO 179 (Charpy)
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground	0,11		

Thermal	dry / moist		standard
Crystalline melting point	343	°C	
Glass transition temperature	143	°C	DIN 53 765
Heat distortion temperature HDT, Method A	277	°C	ISO-R 75 Verfahren A (DIN 53 461)
Max. service temperature			
short term	300	°C	
long term	260	°C	
Thermal conductivity (23° C)	0,24	W/(K·m)	
Coefficient of thermal expansion (23-55°C)	2,2	10 ⁻⁵ 1/K	DIN 53 752

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Electrical	dry / moist		standard
Specific volume resistance	3*10 ⁵	Ω*cm	DIN IEC 60093
Surface resistance	5*10 ⁶	Ω	DIN IEC 60093

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Miscellaneous	dry / moist		standard
Density	1,48	g/cm ³	DIN 53 479
Moisture absorption (23°C/50RH)	0,1	%	DIN EN ISO 62
Water absorption to equilibrium	0,1	%	DIN EN ISO 62
Flammability acc. to UL standard 94	V0		
Resistance to hot water, washing soda:	+		
Resistance to weathering	+		

(1) Testing of semi-finished products

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