

TECAPEEK GF 30

Chemical Designation :

DIN-Abbreviation:

Colours, fillers:

Polyetheretherketone

PEEK GF 30

natur, 30 % glass fibres

Main features

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|---|----------------------------|
| high thermal and mechanical capacity | very rigid |
| inherent low flammability (UL94 V-O) | high dimensional stability |
| very creep resistant | wear resistant |
| resistant to numerous detergents | easily machined |
| resistant to hydrolysis and superheated steam | good radiation-resistance |

Preferred Fields

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|--|-----------------------------------|
| electrical engineering | mechanical engineering |
| automotive engineering | transport and conveyor technology |
| vacuum technology | textile machinery |
| packaging and paper processing machinery | chemical engineering |
| aircraft and aerospace industries | process technology |

Applications

Properties

Mechanical	dry / moist	standard
Tensile strength at yield		MPa
Elongation at yield		%
Tensile strength at break	180	MPa DIN EN ISO 527

Elongation at break	2,5	%	DIN EN ISO 527
Modulus of elasticity in tension	9500	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test	10000	MPa	DIN EN ISO 178
Hardness	M103		ASTM D 785
Impact strength 23° C (Charpy)	60	KJ/m ²	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load	36	MPa	
Time yield limit for 1% elongation after 1000 h		MPa	
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground	0,38–0,46		
Wear p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground		µm/km	

Thermal	dry / moist		standard
Crystalline melting point		°C	
Glass transition temperature	143	°C	DIN 53 765
Heat distortion temperature HDT, Method A	315	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B		°C	
Max. service temperature			
short term	300	°C	
long term	260	°C	
Thermal conductivity (23° C)	0,43	W/(K·m)	
Specific heat (23° C)		J/g.K	
Coefficient of thermal expansion (23–55°C)	2,0	10 ⁻⁵ /K	DIN 53 752

Properties

Electrical	dry / moist		standard
Dielectric constant (10^6 Hz)			
Dielectric loss factor (10^6 Hz)	0,004		DIN 53 483, IEC-250
Specific volume resistance	10^{15}	$\Omega \cdot \text{cm}$	DIN IEC 60093
Surface resistance	10^{15}	Ω	DIN IEC 60093
Dielectric strength	24,5	kV/mm	DIN 53 481, IEC-243, VDE 0303 Teil 2
Resistance to tracking			

Miscellaneous	dry / moist		standard
Density	1,51	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		

(1) Testing of semi-finished products

The above information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of chemical resistance, of certain properties and the suitability of our products and their applications. Our products are not destined for use in medical and dental implants. Existing commercial patents must be observed. Unless otherwise stated, these values represent averages taken from injection moulding samples, dry as moulded. We reserve the right to make technical alterations.
