

## TECAPEEK CF 30

Chemical Designation :

DIN-Abbreviation:

Colours, fillers:

Polyetheretherketone

PEEK CF 30

black, 30% carbon fibre

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### Main features

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

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### Preferred Fields

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

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### Applications

static/dynamic high load bearing, gears, strength parts, rocker arms, slide rails, ball valve seats, chain guides, pump housings, control pistons, pump impellers

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### Properties

#### Mechanical

Tensile strength at yield

Elongation at yield

dry / moist

standard

MPa

%

Tensile strength at break	215	MPa	DIN EN ISO 527
Elongation at break	1,5	%	DIN EN ISO 527
Modulus of elasticity in tension	18500	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test	20000	MPa	DIN EN ISO 178
Hardness	256		ISO 2039/1 (Kugeldruck-Härte, 961N)
Impact strength 23° C (Charpy)	35	KJ/m <sup>2</sup>	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load		MPa	
Time yield limit for 1% elongation after 1000 h		MPa	
Co-efficient of friction p = 0,05 N/mm <sup>2</sup> v=0,6 m/s on steel, hardened and ground			
Wear p = 0,05 N/mm <sup>2</sup> v=0,6 m/s on steel, hardened and ground		µm/km	

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<b>Thermal</b>	<b>dry / moist</b>		<b>standard</b>
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)	0,92	W/(K·m)	
Specific heat (23° C)		J/g.K	
Coefficient of thermal expansion (23-55°C)	1,5	10 <sup>-5</sup> 1/K	DIN 53 752

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## Properties

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<b>Electrical</b>	<b>dry / moist</b>		<b>standard</b>
Dielectric constant ( $10^6$ Hz)			
Dielectric loss factor ( $10^6$ Hz)			
Specific volume resistance	$10^5$ – $10^7$	$\Omega \cdot \text{cm}$	DIN IEC 60093
Surface resistance	$10^5$ – $10^7$	$\Omega$	DIN IEC 60093
Dielectric strength		kV/mm	
Resistance to tracking			

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<b>Miscellaneous</b>	<b>dry / moist</b>		<b>standard</b>
Density	1,40	$\text{g/cm}^3$	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.

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