

PEEK – Polyetheretherketone PEEK GF50

AKROTEK® PEEK GF 50 9 black (5183)

Tensile modulus

19000 MPa

1 mm/min

ISO 527-2

Stress at break

210 MPa

5 mm/min

ISO 527-2

Charpy impact strength

60 kJ/m²

23°C

ISO 179-1/1eU

AKROTEK® PEEK GF 50 9 black (5183) is a 50% glass fibre reinforced process improved polyetheretherketone with very high stiffness and strength

Typical applications

Elements in the automotive-, aeronautical-, industrial- and medical engineering that require high strength in a temperature environment above 150°C

**Mechanical Properties**

Tensile modulus (1 mm/min ISO 527-2) d.a.m.	19000 MPa
Stress at break (5 mm/min ISO 527-2) d.a.m.	210 MPa
Strain at break (5 mm/min ISO 527-2) d.a.m.	1,8 %
Flexural modulus (2 mm/min ISO 178) d.a.m.	19000 MPa
Flexural strength (2 mm/min ISO 178) d.a.m.	320 MPa
Flexural strain at break (2 mm/min ISO 178) d.a.m.	2 %
Charpy impact strength (23°C ISO 179-1/1eU) d.a.m.	60 kJ/m ²
Charpy notched impact strength (23°C ISO 179-1/1eA) d.a.m.	10 kJ/m ²

**Thermal Properties**

Temperature of deflection under load HDT/A (1,8 MPa ISO 75)	> 280 °C
Temperature of deflection under load HDT/C (8 MPa ISO 75)	260 °C
Melt temperature (DSC, 10K/min DIN EN 11357-1)	342 °C

**Flammability**

Burning rate (UL 94) 1,6mm Wall thickness	V-0 Class
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**General properties**

Density (23°C ISO 1183)	1,73 g/cm ³
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Disclaimer:

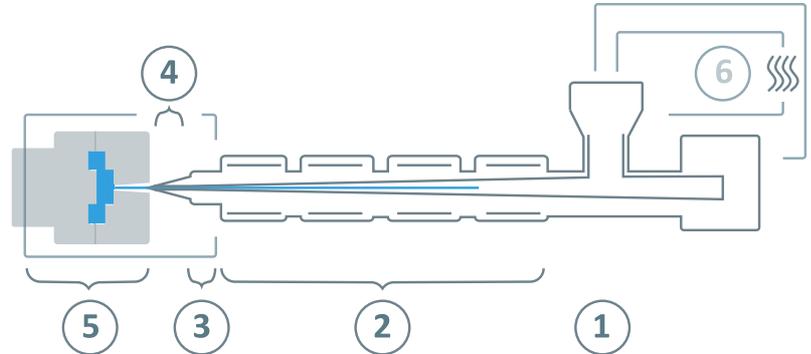
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Processing information

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only dehumidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.



⑥	Drying time	2 - 3 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	150 - 160°C
	Processing moisture	< 0,02%
①	Feed section	60 - 80°C
②	Temperature zone 1 - Zone 4	365 - 390°C
③	Nozzle temperature	400°C
④	Melt temperature	370 - 400°C
⑤	Mold temperature	160 - 200°C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 bar
	Injection speed	medium to high
	Screw speed	5 - 10 m/min

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