

PK – Polyketone PK GF50

AKROTEK® PK-VM GF 50 natural (4905)

Tensile modulus

14500 MPa

1 mm/min
ISO 527-2

Stress at break

190 MPa

5 mm/min
ISO 527-2

Charpy impact strength

80 kJ/m²

23°C
ISO 179-1/1eU

AKROTEK® PK-VM GF 50 natural (4905) is a 50% glass fibre reinforced, low viscous polyketone with very high stiffness and strength and light inherent color.

Typical applications

Components in mechanical engineering and the automotive industry.



Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)

d.a.m.	14500 MPa
conditioned	14000 MPa

Stress at break (5 mm/min | ISO 527-2)

d.a.m.	190 MPa
conditioned	185 MPa

Strain at break (5 mm/min | ISO 527-2)

d.a.m.	2,6 %
conditioned	2,6 %

Charpy impact strength (23°C | ISO 179-1/1eU)

d.a.m.	80 kJ/m ²
conditioned	80 kJ/m ²

Charpy notched impact strength (23°C | ISO 179-1/1eA)

d.a.m.	15 kJ/m ²
conditioned	15 kJ/m ²



Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75) 220 °C

Melt temperature (DSC, 10K/min | DIN EN 11357-1) 220 °C



Flammability

Burning rate (UL 94)

1,6mm Wall thickness HB Class

Burning rate (<100 mm/min) (> 1 mm Thickness | FMVSS 302) +



General properties

Density (23°C | ISO 1183) 1,65 g/cm³

Humidity absorption (70°C, 62% r.H. | ISO 1110) 0,4 - 0,5 %

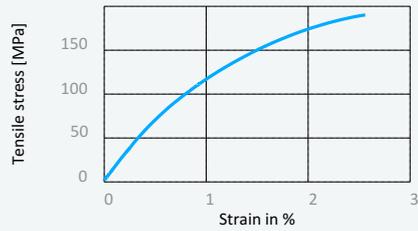
Molding shrinkage (flow | ISO 294-4) 0,1-0,3 %

Molding shrinkage (transverse | ISO 294-4) 0,3-0,5 %

Disclaimer:

All specifications and information given on this website are based on our current knowledge and experience. A legally binding promise of certain characteristics or suitability for a concrete individual case cannot be derived from this information. The information supplied here is not intended to release processors and users from the responsibility of carrying out their own tests and inspections in each concrete individual case. AKRO®, AKROMID®, AKROLEN®, AKROLOY®, AKROTEK®, ICX® and PRECITE® are registered trademarks of the Feddersen Group.

Stress strain chart at 23°C



Electrical Properties

Volume resistivity (IEC 60093)

d.a.m.

1,0E+13 Ohm x cm

conditioned

1,0E+10 Ohm x cm

Surface resistivity (acc. to IEC 60093)

d.a.m.

1,0E+12 Ohm

conditioned

1,0E+10 Ohm

Disclaimer:

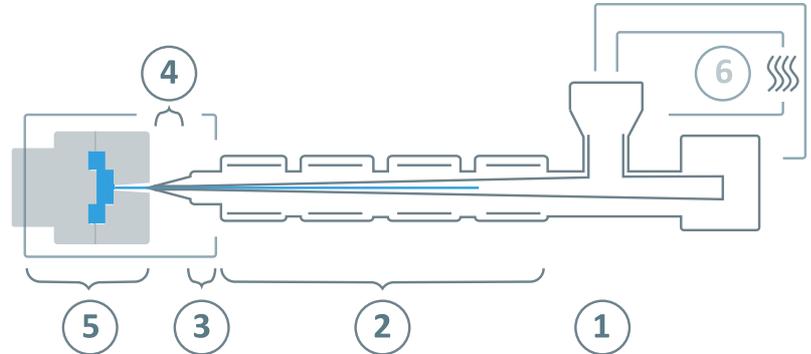
All specifications and information given on this website are based on our current knowledge and experience. A legally binding promise of certain characteristics or suitability for a concrete individual case cannot be derived from this information. The information supplied here is not intended to release processors and users from the responsibility of carrying out their own tests and inspections in each concrete individual case. AKRO®, AKROMID®, AKROLEN®, AKROLOY®, AKROTEK®, ICX® and PRECITE® are registered trademarks of the Feddersen Group.

PK – Polyketone PK GF50

AKROTEK® PK-VM GF 50 natural (4905)

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	0 - 4 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80°C
	Processing moisture	0,02 - 0,1%
①	Feed section	60 - 80°C
②	Temperature zone 1 - Zone 4	220 - 260°C
③	Nozzle temperature	230 - 260°C
④	Melt temperature	230 - 260°C
⑤	Mold temperature	60 - 120°C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	30 - 70 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min

Warning

The molding machine needs to be purged with polyolefines before and after processing of AKROTEK® PK! There is a risk of cross linking caused by reactions with POM or PA as well as unsuitable master batches! Cross linking is visible through dark spots! In this case purge immediately with polyolefines.

Disclaimer:

All specifications and information given on this website are based on our current knowledge and experience. A legally binding promise of certain characteristics or suitability for a concrete individual case cannot be derived from this information. The information supplied here is not intended to release processors and users from the responsibility of carrying out their own tests and inspections in each concrete individual case. AKRO®, AKROMID®, AKROLEN®, AKROLOY®, AKROTEK®, ICX® and PRECITE® are registered trademarks of the Feddersen Group.