

AKROTEK®

PK-VM CF 10 TM black (6135)

PK CF10

AKROTEK® PK-VM CF 10 TM black (6135) is a 10% carbon fibre reinforced polyketone with tribological modification and a high elongation at break. The outstanding friction and wear properties enable the use for demanding components exposed to tribological stress. The most important markets for AKROTEK® PK are the furniture industry and mechanical engineering.

Features

hydrolysis / chemically stabilised tribological modified

Properties

Modulus

3.500 MPa

Strength

59 MPa

Impact

100 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

3500 MPa

1 mm/min | conditioned

3400 MPa

Tensile stress at yield

ISO 527-2

50 mm/min | d.a.m.

59 MPa

50 mm/min | conditioned

59 MPa

Tensile strain at break

ISO 527-2

50 mm/min | d.a.m.

> 30 %

50 mm/min | conditioned

> 30 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

100 kJ/m²

23°C | conditioned

100 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

6 kJ/m²

Thermal Properties

Melting temperature

ISO 11357-3

DSC, 10K/min

220 °C

Flammability

Flammability UL 94	1,6 mm Wall thickness	HB Class
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,27 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,7 - 0,8 %
Molding shrinkage ISO 294-4	flow	0,4 - 0,6 %
	transverse	0,8 - 1,0 %

Electrical Properties

Surface resistivity IEC 62631-3-2	d.a.m.	10¹² Ω
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Rheological Properties

Flowability AKRO	1 mm Thickness	250 mm
MVR ISO 1133	240°C/2,16kg	32 cm³/10 min

Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



D	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

Diagrams

