

AKROTEK® PRELIMINARY

PK-VM GF 40 black (8687)

PK GF40

AKROTEK® PK-VM GF 40 black (8687) is a 40% glass fibre reinforced Polyketone with very high stiffness and strength. Due to its very good media resistance, the material is suitable for use in applications that carry cooling water. The material can be laser marked. This type was developed as the successor to PK-VM GF 40 schwarz (7521) in order to meet the requirements for a larger processing window during processing.

Features

hydrolysis / chemically stabilised

Properties

Modulus

11.000 MPa

Strength

160 MPa

Impact

80 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

11000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

160 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,6 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

80 kJ/m²

Thermal Properties

Melting temperature

ISO 11357-3

DSC, 10K/min

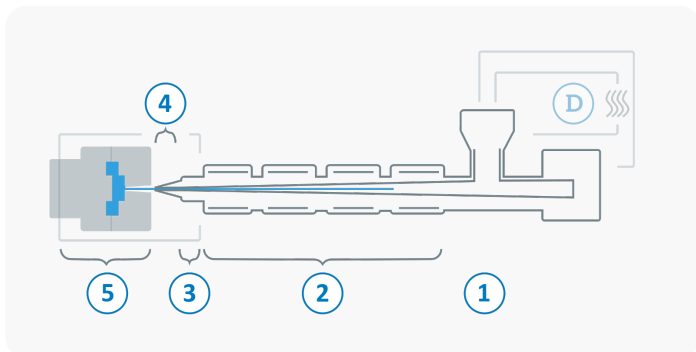
220 °C

General Properties

Density ISO 1183	23°C	1,56 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,4 - 0,5 %
Molding shrinkage ISO 294-4	flow	0,2 - 0,4 %
	transverse	0,6 - 0,8 %

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