+135-3858-6433 (GuangDong)
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AKRO COMPOUNDS

Compound No.: **8688**

AKROTEK® PRELIMINARY

PK-VM GF 50 black (8688)

PK GF50

AKROTEK® PK-VM GF 50 black (8688) is a 50% glass fibre reinforced polyketone with very high stiffness and strength. PK is characterized by its outstanding media resistance, which qualifies it to be used for components that are in contact with chemicals. The material can be laser marked. This type was developed as the successor to PK-VM GF 50 black (5394) in order to meet the requirements for a larger processing window during processing.

Features

hydrolysis / chemically stabilised

Properties

Modulus	Strength	Impact
14.500 MPa	**165** MPa	**60** kJ/m²

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m.	**14500 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m.	**165 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m.	**2,1 %**
Flexural modulus ISO 178	2 mm/min | d.a.m.	**13500 MPa**
Flexural strength ISO 178	2 mm/min | d.a.m.	**210 MPa**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m.	**60 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m.	**15 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**
GWFI IEC 60695-2-12	0,8 mm Wall thickness 1,6 mm Wall thickness	**725 °C** **725 °C**
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	**1,65 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**0,4 - 0,5 %**
Molding shrinkage ISO 294-4	flow transverse	**0,1 - 0,3 %** **0,4 - 0,6 %**

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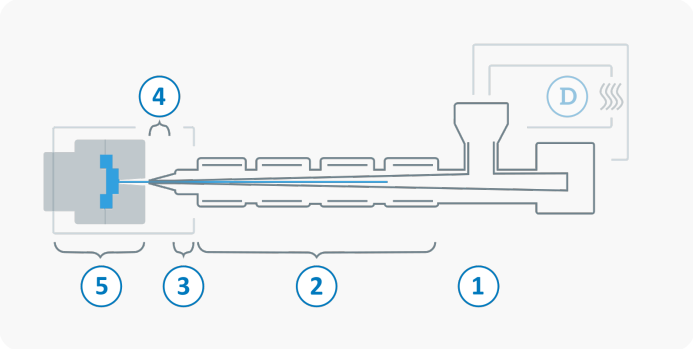
Processing

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 (τ <= -30°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