

AKROTEK®

PK-VM GF 30 7 HU black (8695)

PK GF30

AKROTEK® PK-VM GF 30 7 HU black (8695) is a 30% glass fibre reinforced Polyketone with average stiffness and strength. Due to its very good media resistance, the material is suitable for the use in applications that carry cooling water. The PK-VM GF 30 schwarz (8655) was developed as the successor to meet the requirements for a larger process window during processing.

Features

hydrolysis / chemically stabilised

Regulatory



Properties

Modulus

8.000 MPa

Strength

130 MPa

Impact

65 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

8000 MPa

1 mm/min | conditioned

7700 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

130 MPa

5 mm/min | conditioned

120 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,1 %

5 mm/min | conditioned

3,1 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

8200 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.

65 kJ/m²

23°C | conditioned

65 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

15 kJ/m²

23°C | conditioned

15 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	215 °C
Melting temperature ISO 11357-3	DSC, 10K/min	215 °C
Coefficient of linear thermal expansion ISO 11359-1/2	23°C to 80°C parallel	0,18 10 ⁻⁴ /K
	23°C to 80°C transverse	1,16 10 ⁻⁴ /K

Flammability

Flammability UL 94	UL 0,8 mm Wall thickness	HB Class
	UL 1,6 mm Wall thickness	HB Class
	UL 3,2 mm Wall thickness	HB Class
GWFI IEC 60695-2-12	0,8 mm Wall thickness	725 °C
	1,6 mm Wall thickness	725 °C
HWI UL 746A	1,6 mm Wall thickness	1 PLC

General Properties

Density ISO 1183	23°C	1,48 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,6 - 0,7 %
Molding shrinkage ISO 294-4	flow	0,3 - 0,5 %
	transverse	0,8 - 1,0 %

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m.	10 ¹³ Ω x cm
Surface resistivity IEC 62631-3-2	d.a.m.	10 ¹² Ω

Comparative tracking index

IEC 60112

Test liquid A

600 V

Rheological Properties

MVR

ISO 1133

240°C/2,16kg

4 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

