

Compound No.: 8683

AKROTEK® PRELIMINARY PK-VM GF 50 natural (8683)

PK GF50

AKROTEK® PK-VM GF 50 natural (8683) is a 50% 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. This type was developed as the successor to PK-VM GF 50 natur (4905) in order to meet the requirements for a larger processing window during processing.

Features

hydrolysis / chemically stabilised

Properties

Modulus	Strength	Impact
14.500 MPa	190 MPa	80 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.	190 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
Charpy notched impact strength ISO 179-1/1eA	23°C d.a.m.	15 kJ/m²

Thermal Properties

Melting temperature	DCC 401// :	220.90
ISO 11357-3	DSC, 10K/min	220 °C



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Flammability

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

General Properties

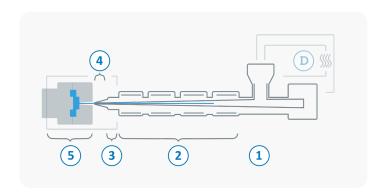
Density ISO 1183	23°C	1,65 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,4 - 0,5 %
Molding shrinkage	flow	0,1 - 0,3 %
ISO 294-4	transverse	0,4 - 0,6 %





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
\ominus	Holding pressure, spec.	300 - 800 bar
Θ	Back pressure, spec.	30 - 70 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min