

VESTAKEEP® 4000 CF30

Polyetheretherketone

Evonik Industries AG

Message:

Carbon fiber-reinforced (30%) polyether ether ketone

VESTAKEEP 4000 CF30 is a carbon fiber-reinforced (30%) polyether ether ketone for injection molding.

The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP 4000 CF30 are self-extinguishing.

VESTAKEEP 4000 CF30 can be processed by common injection molding machines for thermoplastics.

We recommend a melt temperature between 380°C and 400°C during the injection molding process. The mold temperature should be within a range of 160°C to 200 °C, preferably 180°C.

General Information			
Filler / Reinforcement	Carbon Fiber,30% Filler by Weight		
Features	Good Chemical Resistance		
	Self Extinguishing		
	Semi Crystalline		
Forms	Granules		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.40	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (400°C/10.0 kg)	3.00	cm ³ /10min	ISO 1133
Molding Shrinkage ¹			ISO 294-4
Across Flow : 2.00 mm	0.40	%	
Flow : 2.00 mm	0.0	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	23000	MPa	ISO 527-2
Tensile Stress	240	MPa	ISO 527-2
Tensile Strain (Break)	2.0	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	9.0	kJ/m ²	
23°C, Complete Break	10	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C, Complete Break	60	kJ/m ²	
23°C, Complete Break	60	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	335	°C	ISO 75-2/B
1.8 MPa, Unannealed	325	°C	ISO 75-2/A

Melting Temperature ²	340	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	1.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+5	ohms	IEC 60093
Volume Resistivity	1.0E+6	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	17.0		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	V-0		UL 94
Glow Wire Flammability Index (2.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (2.00 mm)	850	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Processing (Melt) Temp	380 to 400	°C	
Mold Temperature	160 to 200	°C	
NOTE			

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| 1. | determined on 2 mm sheets with film gate at rim mold temperature 180°C |
| 2. | 2nd Heating |

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