

VESTAKEEP® 4000 FC30

Polyetheretherketone
Evonik Industries AG

Message:

Carbon fiber-reinforced, graphite and PTFE-filled polyether ether ketone
VESTAKEEP 4000 FC30 is a carbon fiberreinforced, graphite and PTFE-filled polyether ether ketone for injection molding. Parts made of this resin can be used for bearing bushing or gearbox parts due to the self-lubricating effect.
The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP 4000 FC30 are self-extinguishing.
VESTAKEEP 4000 FC30 can be processed by common injection molding machines for thermoplastics.
We recommend a melt temperature between 370°C and 380°C during the injection molding process. If temperatures exceed 380°C, toxic gases can be released. Adequate ventilation and protective equipment must be provided. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

General Information			
UL YellowCard	E100203-101110480		
Filler / Reinforcement	Carbon Fiber		
	Graphite Powder		
Additive	PTFE Lubricant		
Features	Good Chemical Resistance		
	Self Extinguishing		
	Self Lubricating		
	Semi Crystalline		
Uses	Bearings		
	Bushings		
	Gears		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.45	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (380°C/5.0 kg)	2.50	cm ³ /10min	ISO 1133
Molding Shrinkage ¹			ISO 294-4
Across Flow : 180°C, 2.00 mm	0.40	%	
Flow : 180°C, 2.00 mm	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	11500	MPa	ISO 527-2
Tensile Stress (Break)	140	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	7.0	kJ/m ²	
23°C, Complete Break	8.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C, Complete Break	45	kJ/m ²	
23°C, Complete Break	45	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	330	°C	ISO 75-2/B
1.8 MPa, Unannealed	310	°C	ISO 75-2/A
Vicat Softening Temperature			
--	340	°C	ISO 306/A
--	335	°C	ISO 306/B
Melting Temperature (DSC) ²	340	°C	ISO 3146
CLTE - Flow (23 to 55°C)	2.0E-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+7	ohms·cm	IEC 60093
Relative Permittivity			IEC 60250
50 Hz	6.10		
1 MHz	4.90		
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)	900	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Processing (Melt) Temp	370 to 380	°C	
Mold Temperature	160 to 200	°C	
NOTE			
1.	determined on 2 mm sheets with film gate at rim mold temperature 180°C		
2.	2nd heating		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT