

VESTAKEEP® 4000 CC20

Polyetheretherketone

Evonik Industries AG

Message:

Ceramic filled (20%) polyether ether ketone

VESTAKEEP 4000 CC20 is a ceramic filled (20%) polyether ether ketone for injection molding and extrusion.

The semi-crystalline polymer features superior mechanical, thermal, and chemical resistance. Parts made from VESTAKEEP 4000 CC20 are self-extinguishing.

VESTAKEEP 4000 CC20 can be processed on common injection molding machines for thermoplastics.

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

General Information			
Filler / Reinforcement	Ceramic Fiber,20% Filler by Weight		
Features	Good Chemical Resistance		
	Self Extinguishing		
	Semi Crystalline		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.49	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (380°C/5.0 kg)	8.00	cm ³ /10min	ISO 1133
Water Absorption (Saturation, 23°C)	0.40	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	4100	MPa	ISO 527-2
Tensile Stress (Yield)	95.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	5.0	%	
Break	20	%	
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	7.0	kJ/m ²	
Charpy Unnotched Impact Strength (-30°C)	Partial Break		ISO 179/1eU
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	210	°C	ISO 75-2/B
1.8 MPa, Unannealed	155	°C	ISO 75-2/A
Vicat Softening Temperature			

--	335	°C	ISO 306/A
--	305	°C	ISO 306/B
Melting Temperature ¹	340	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	4.5E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating (1.60 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Processing (Melt) Temp	380 to 400	°C	
Mold Temperature	160 to 200	°C	
NOTE			
1.	2nd heating		

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