Edgetek™ PK-30CF/000 BK

Polyetheretherketone

PolyOne Corporation

Message:

Edgetek®The engineering thermoplastic polymer product portfolio includes a series of standard and customizable high-performance materials. The combination includes high-temperature resistant materials for high-temperature working environments, and high-modulus/structural materials for load-bearing, high-strength applications and flame-retardant products. These polymers are made by mixing engineering thermoplastic resins with different reinforcing additives, such as carbon fiber, glass fiber and glass beads.

General Information			
Filler / Reinforcement	Carbon fiber reinforced material, 30% filler by weight		
Features	Heat resistance, high General		
Uses	Industrial application Application in Automobile Field General Consumer goods application field		
Appearance	Black		
Forms	Particle		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.40	g/cm³	ASTM D792
Molding Shrinkage			ASTM D955
Flow	0.050 - 0.20	%	ASTM D955
Transverse flow	1.4 - 1.6	%	ASTM D955
Water Absorption			ASTM D570
24 hr, 3.18 mm	0.050	%	ASTM D570
Saturation	0.13	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D, 23°C)	89		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [1] (23°C)	25000	MPa	ASTM D638
Tensile Strength [2]			ASTM D638
Fracture, 23°C	245	MPa	ASTM D638
Fracture, 120°C	160	MPa	ASTM D638
Tensile Elongation [3] (Break)	1.0 - 2.0	%	ASTM D638
Flexural Modulus			ASTM D790
23°C	22000	MPa	ASTM D790
120°C	20000	MPa	ASTM D790

Flexural Strength			ASTM D790
23°C	380	MPa	ASTM D790
120°C	260	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C, 3.18 mm, Injection Molded)	100	J/m	ASTM D256A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.18 mm)	325	°C	ASTM D648
Glass Transition Temperature	146	°C	DSC
Melting Temperature (DSC)	343	°C	ISO 3146
Linear thermal expansion coefficient			ISO 11359-2
Flow: < 146°C	6.0E-6	cm/cm/°C	ISO 11359-2
Flow: > 146°C	8.0E-6	cm/cm/°C	ISO 11359-2
Lateral: < 146°C	5.0E-5	cm/cm/°C	ISO 11359-2
Lateral: > 146°C	1.0E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity			ASTM E1461
60°C [4]	0.48	W/m/K	ASTM E1461
60°C [5]	1.7	W/m/K	ASTM E1461
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+4 - 1.0E+5	ohms	ASTM D257
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.800 mm)	V-0		Internal method
Injection	**Nominal Value**	**Unit**	
Drying Temperature	150	°C	
Drying Time	4.0 - 6.0	hr	
Processing (Melt) Temp	350 - 390	°C	
Mold Temperature	170 - 190	°C	
Injection instructions			
Injection Pressure: MED-HIGHHold Pressure: MED-HIGHScrew Speed: MODERATEBack Pressure: LOW			
NOTE			
1.	Type 1, 5.1 mm/min		
2.	5.0 mm/min		
3.	Type 1, 5.1 mm/min		
4.	through-plane		
5.	in-plane		

Recommended distributors for this material

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