



## Edgetek™ PK-30CF/000 BK

### Polyetheretherketone

#### Key Characteristics

##### Product Description

30% Carbon Fiber Reinforced PEEK Compound with Standard Flowability for Injection Molding Application

##### General

Material Status	• Commercial: Active	
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America
Filler / Reinforcement	• Carbon Fiber, 30% Filler by Weight	
Features	• General Purpose	• High Heat Resistance
Uses	• Automotive Applications • Consumer Applications	• General Purpose • Industrial Applications
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

#### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.40	1.40	ASTM D792
Molding Shrinkage - Flow	5.0E-4 to 2.0E-3 in/in	0.050 to 0.20 %	ASTM D955
Molding Shrinkage - Across Flow	0.014 to 0.016 in/in	1.4 to 1.6 %	ASTM D955
Water Absorption (24 hr, 0.125 in (3.18 mm))	0.050 %	0.050 %	ASTM D570
Water Absorption (Saturation)	0.13 %	0.13 %	ASTM D570
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus <sup>2</sup> (73°F (23°C))	3.63E+6 psi	25000 MPa	ASTM D638
Tensile Strength <sup>3</sup>			ASTM D638
Break, 73°F (23°C)	35500 psi	245 MPa	
Break, 248°F (120°C)	23200 psi	160 MPa	
Tensile Elongation <sup>2</sup> (Break)	1.0 to 2.0 %	1.0 to 2.0 %	ASTM D638
Flexural Modulus			ASTM D790
73°F (23°C)	3.19E+6 psi	22000 MPa	
248°F (120°C)	2.90E+6 psi	20000 MPa	
Flexural Strength			ASTM D790
73°F (23°C)	55100 psi	380 MPa	
248°F (120°C)	37700 psi	260 MPa	
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	1.9 ft-lb/in	100 J/m	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore D, 73°F (23°C))	89	89	ISO 868

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Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	617 °F	325 °C	ASTM D648
Glass Transition Temperature	295 °F	146 °C	DSC
Melting Temperature (DSC)	649 °F	343 °C	ISO 3146
CLTE - Flow < 295°F (< 146°C) > 295°F (> 146°C)	3.3E-6 in/in/°F 4.4E-6 in/in/°F	6.0E-6 cm/cm/°C 8.0E-6 cm/cm/°C	ISO 11359-2
CLTE - Transverse < 295°F (< 146°C) > 295°F (> 146°C)	2.8E-5 in/in/°F 5.6E-5 in/in/°F	5.0E-5 cm/cm/°C 1.0E-4 cm/cm/°C	ISO 11359-2
Thermal Conductivity 140°F (60°C) <sup>4</sup> 140°F (60°C) <sup>5</sup>	3.3 Btu·in/hr/ft²/°F 12 Btu·in/hr/ft²/°F	0.48 W/m/K 1.7 W/m/K	ASTM E1461
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Surface Resistivity	1.0E+4 to 1.0E+5 ohms	1.0E+4 to 1.0E+5 ohms	ASTM D257
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.0315 in (0.800 mm))	V-0	V-0	Internal Method

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	302 °F	150 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Processing (Melt) Temp	662 to 734 °F	350 to 390 °C
Mold Temperature	338 to 374 °F	170 to 190 °C

#### Injection Notes

Injection Pressure: MED-HIGH  
 Hold Pressure: MED-HIGH  
 Screw Speed: MODERATE  
 Back Pressure: LOW

#### Notes

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Type I, 0.20 in/min (5.1 mm/min)

<sup>3</sup> 0.20 in/min (5.0 mm/min)

<sup>4</sup> through-plane

<sup>5</sup> in-plane

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