

Stat-Tech™ 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 • Europe • Asia Pacific • North America
Filler / Reinforcement	• Carbon Fiber, 30% Filler by Weight
Features	• General Purpose • High Heat Resistance
Uses	• Automotive Applications • General Purpose • Consumer Applications • Industrial Applications
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / 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 ² (73°F (23°C))	3.63E+6 psi	25000 MPa	ASTM D638
Tensile Strength			ASTM D638
Break, 73°F (23°C) ³	35500 psi	245 MPa	
Break, 122°F (50°C)	31200 psi	215 MPa	
Break, 203°F (95°C)	25400 psi	175 MPa	
Break, 248°F (120°C) ³	23200 psi	160 MPa	
Tensile Elongation ² (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, 10 sec)	89	89	ISO 48-4

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) ⁴ 140°F (60°C) ⁵	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 (0.031 in (0.8 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

¹ Typical values are not to be construed as specifications.

² Type I, 0.20 in/min (5.1 mm/min)

³ 0.20 in/min (5.0 mm/min)

⁴ through-plane

⁵ in-plane