



## Edgetek™ PK-30CF/000 FCR BK

### Polyetheretherketone

#### Key Characteristics

##### Product Description

30% Carbon Fiber Reinforced PEEK Compound with Ultra-High Flowability for Injection Molding Application

##### General

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

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

| 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       |
| 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>2</sup> (Break, 73°F (23°C))                                        | 34800 psi               | 240 MPa               | ASTM D638       |
| Tensile Elongation <sup>2</sup> (Break)                                                   | 1.0 to 2.0 %            | 1.0 to 2.0 %          | ASTM D638       |
| Flexural Modulus (73°F (23°C))                                                            | 3.19E+6 psi             | 22000 MPa             | ASTM D790       |
| Flexural Strength                                                                         | 52200 psi               | 360 MPa               | ASTM D790       |
| Impact                                                                                    | Typical Value (English) | Typical Value (SI)    | Test Method     |
| Notched Izod Impact<br>73°F (23°C), 0.125 in (3.18 mm),<br>Injection Molded               | 1.5 ft·lb/in            | 80 J/m                | ASTM D256A      |
| Thermal                                                                                   | Typical Value (English) | Typical Value (SI)    | Test Method     |
| Deflection Temperature Under Load<br>264 psi (1.8 MPa), Unannealed, 0.125 in<br>(3.18 mm) | 617 °F                  | 325 °C                | ASTM D648       |
| 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      |

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| 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)*Beyond Polymers.**Better Business Solutions.<sup>SM</sup>*