



## HiFill® PEEK LCF40 2000

Techmer Polymer Modifiers - *Polyetheretherketone*

### Action



### General Information

#### General

|                        |                                           |
|------------------------|-------------------------------------------|
| Material Status        | • Commercial: Active                      |
| Availability           | • North America                           |
| Filler / Reinforcement | • Long Carbon Fiber, 40% Filler by Weight |
| Features               | • Good Flow                               |
| Appearance             | • Black                                   |
| Forms                  | • Pellets                                 |
| Processing Method      | • Injection Molding                       |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                                | Nominal Value | Unit     | Test Method |
|---------------------------------------------------------|---------------|----------|-------------|
| Density / Specific Gravity                              | 1.45          |          | ASTM D792   |
| Molding Shrinkage - Flow (0.125 in)                     | 1.0E-3        | in/in    | ASTM D955   |
| Water Absorption (24 hr)                                | 0.12          | %        | ASTM D570   |
| Mechanical                                              | Nominal Value | Unit     | Test Method |
| Tensile Modulus                                         | 5.90E+6       | psi      | ASTM D638   |
| Tensile Strength (Break)                                | 40000         | psi      | ASTM D638   |
| Tensile Elongation (Break)                              | 0.80          | %        | ASTM D638   |
| Flexural Modulus                                        | 4.40E+6       | psi      | ASTM D790   |
| Flexural Strength                                       | 60000         | psi      | ASTM D790   |
| Impact                                                  | Nominal Value | Unit     | Test Method |
| Notched Izod Impact (73°F, 0.125 in)                    | 2.0           | ft·lb/in | ASTM D256   |
| Unnotched Izod Impact                                   | 15            | ft·lb/in | ASTM D4812  |
| Hardness                                                | Nominal Value | Unit     | Test Method |
| Rockwell Hardness (R-Scale)                             | 118           |          | ASTM D785   |
| Thermal                                                 | Nominal Value | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 550           | °F       | ASTM D648   |
| CLTE - Flow                                             | 6.0E-6        | in/in/°F | ASTM D696   |
| Electrical                                              | Nominal Value | Unit     | Test Method |
| Volume Resistivity                                      | < 1.0E+6      | ohms·cm  | ASTM D257   |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 300           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Rear Temperature       | 680 to 730    | °F   |
| Middle Temperature     | 680 to 730    | °F   |
| Front Temperature      | 680 to 730    | °F   |
| Processing (Melt) Temp | 680 to 720    | °F   |
| Mold Temperature       | 350 to 425    | °F   |
| Back Pressure          | 50.0 to 100   | psi  |
| Screw Speed            | 50 to 100     | rpm  |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.