

## Electrafil® PA6/6 CF20 L BK

Techmer Polymer Modifiers - *Polyamide 66*

### General Information

#### General

|                        |                                      |
|------------------------|--------------------------------------|
| Material Status        | • Commercial: Active                 |
| Availability           | • North America                      |
| Filler / Reinforcement | • Carbon Fiber, 20% Filler by Weight |
| Additive               | • Lubricant                          |
| Features               | • Conductive • Lubricated            |
| Appearance             | • Black                              |
| Forms                  | • Pellets                            |
| Processing Method      | • Injection Molding                  |

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

| Physical                                                | Nominal Value    | Unit     | Test Method |
|---------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.23             |          | ASTM D792   |
| Molding Shrinkage - Flow (0.125 in)                     | 5.0E-3           | in/in    | ASTM D955   |
| Water Absorption (24 hr)                                | 0.85             | %        | ASTM D570   |
| Mechanical                                              | Nominal Value    | Unit     | Test Method |
| Tensile Strength (Break)                                | 26000            | psi      | ASTM D638   |
| Tensile Elongation (Break)                              | 3.0              | %        | ASTM D638   |
| Flexural Modulus                                        | 2.35E+6          | psi      | ASTM D790   |
| Flexural Strength                                       | 40000            | psi      | ASTM D790   |
| Impact                                                  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (73°F, 0.125 in)                    | 1.2              | ft-lb/in | ASTM D256   |
| 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) | 498              | °F       | ASTM D648   |
| CLTE - Flow                                             | 3.8E-5           | in/in/°F | ASTM D696   |
| Electrical                                              | Nominal Value    | Unit     | Test Method |
| Surface Resistivity                                     | 1.0E+2 to 1.0E+6 | ohms     | ASTM D257   |
| Volume Resistivity                                      | 1.0E+2 to 1.0E+6 | ohms·cm  | ASTM D257   |
| Flammability                                            | Nominal Value    | Unit     | Test Method |
| Flame Rating (0.06 in)                                  | HB               |          | UL 94       |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 180           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.10          | %    |
| Rear Temperature       | 540 to 560    | °F   |
| Middle Temperature     | 550 to 570    | °F   |
| Front Temperature      | 530 to 550    | °F   |
| Nozzle Temperature     | 520 to 580    | °F   |
| Processing (Melt) Temp | 540 to 580    | °F   |
| Mold Temperature       | 175 to 220    | °F   |
| Injection Rate         | Slow-Moderate |      |
| Back Pressure          | 0.00 to 50.0  | psi  |

#### Injection Notes



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Screw Speed: Slow  
Recommendations for Molding and Tool Conditions: Well vented mold  
Moisture Content, as received: Product is packaged at 0.2% or less.

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#### Notes

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

