

**InElec® PBTCF30**
*Americhem - Polybutylene Terephthalate*
**General Information**
**Product Description**

30% CARBON FIBER REINFORCED PBT

**General**

|                        |   |   |  |
|------------------------|---|---|--|
| Material Status        | • Commercial: Active  |   |  |
| Availability           | • Africa & Middle East<br>• Asia Pacific  | • Europe<br>• Latin America   | • North America                                    |
| Filler / Reinforcement | • Carbon Fiber, 30% Filler by Weight  |   |  |
| Features               | • Electrically Conductive<br>• ESD Protection<br>• Filled                               | • Good Dimensional Stability<br>• High Stiffness<br>• High Strength   | • Permanent Antistatic                             |
| Uses                   | • Automotive Applications<br>• Battery Cases<br>• Connectors<br>• Consumer Applications | • Electrical/Electronic Applications<br>• Engineering Parts<br>• Household Goods<br>• Industrial Applications | • Industrial Parts<br>• Semiconductor Applications |
| Forms                  | • Pellets   |   |  |
| Processing Method      | • Injection Molding   |   |  |

**Properties <sup>1</sup>**

| Physical  | Nominal Value    | Unit     | Test Method |
|---|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.41             |          | ASTM D792   |
| Molding Shrinkage - Flow                                | 1.0E-3 to 2.0E-3 | in/in    | ASTM D955   |
| Water Absorption (24 hr)                                | 0.050            | %        | ASTM D570   |
| Mechanical  | Nominal Value    | Unit     | Test Method |
| Tensile Modulus   | 3.00E+6          | psi      | ASTM D638   |
| Tensile Strength  | 21000            | psi      | ASTM D638   |
| Tensile Elongation (Yield)                              | 1.0 to 3.0       | %        | ASTM D638   |
| Flexural Modulus  | 2.30E+6          | psi      | ASTM D790   |
| Flexural Strength                                       | 29500            | psi      | ASTM D790   |
| Impact  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (0.125 in)                          | 1.1              | ft·lb/in | ASTM D256   |
| Unnotched Izod Impact (0.125 in)                        | 10               | ft·lb/in | ASTM D4812  |
| Thermal   | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 425              | °F       | ASTM D648   |
| Electrical  | Nominal Value    | Unit     | Test Method |
| Surface Resistivity                                     | 1.0E+2 to 1.0E+4 | ohms     |             |

**Processing Information**

| Injection              | Nominal Value    | Unit |
|------------------------|------------------|------|
| Drying Temperature     | 230              | °F   |
| Drying Time            | 4.0              | hr   |
| Processing (Melt) Temp | 430 to 500       | °F   |
| Mold Temperature       | 225              | °F   |
| Back Pressure          | 50.0 to 100      | psi  |
| Screw Speed            | 40 to 70         | rpm  |
| Vent Depth             | 5.0E-4 to 1.0E-3 | in   |

