

# Electrafil® PC-50/EC/VO

Polycarbonate  
Techmer Engineered Solutions

Message:

Electrafil® PC-50/EC/VO is a polycarbonate (PC) product. It can be processed by injection molding and is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. Electrafil® The application fields of PC-50/EC/VO include packaging, engineering/industrial accessories, automobile industry, commercial/office supplies and conveyor belts.

Features include:

- flame retardant/rated flame
- ROHS certification
- Flame Retardant
- Conductivity
- carbon black

| General Information                 |                        |                   |             |
|-------------------------------------|------------------------|-------------------|-------------|
| Additive                            | Carbon black           |                   |             |
|                                     | Flame retardancy       |                   |             |
| Features                            | Conductivity           |                   |             |
|                                     | Antistatic property    |                   |             |
|                                     | Flame retardancy       |                   |             |
| Uses                                | Packaging              |                   |             |
|                                     | Bushing                |                   |             |
|                                     | Conveyor accessories   |                   |             |
|                                     | Automotive Electronics |                   |             |
|                                     | Business equipment     |                   |             |
| RoHS Compliance                     | RoHS compliance        |                   |             |
| Appearance                          | Natural color          |                   |             |
| Forms                               | Particle               |                   |             |
| Processing Method                   | Injection molding      |                   |             |
| Physical                            | Nominal Value          | Unit              | Test Method |
| Specific Gravity                    | 1.31                   | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)  | 0.50                   | %                 | ASTM D955   |
| Water Absorption (24 hr)            | 0.15                   | %                 | ASTM D570   |
| Mechanical                          | Nominal Value          | Unit              | Test Method |
| Tensile Strength (23°C)             | 55.8                   | MPa               | ASTM D638   |
| Flexural Modulus (23°C)             | 2760                   | MPa               | ASTM D790   |
| Flexural Strength (23°C)            | 84.1                   | MPa               | ASTM D790   |
| Impact                              | Nominal Value          | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.18 mm) | 53                     | J/m               | ASTM D256   |
| Thermal                             | Nominal Value          | Unit              | Test Method |

|                                                         |               |      |             |
|---------------------------------------------------------|---------------|------|-------------|
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 127           | °C   | ASTM D648   |
| Electrical                                              | Nominal Value | Unit | Test Method |
| Surface Resistivity                                     | 5.0E+5        | ohms | ASTM D257   |
| Flammability                                            | Nominal Value | Unit | Test Method |
| Flame Rating (1.59 mm)                                  | V-0           |      | UL 94       |

#### Additional Information

Surface Resistivity, ASTM D4496: 1E3-1E6 ohms

|                        |               |      |
|------------------------|---------------|------|
| Injection              | Nominal Value | Unit |
| Drying Temperature     | 121           | °C   |
| Drying Time            | 4.0           | hr   |
| Suggested Max Moisture | 0.050         | %    |
| Rear Temperature       | 288 - 304     | °C   |
| Middle Temperature     | 293 - 316     | °C   |
| Front Temperature      | 293 - 327     | °C   |
| Nozzle Temperature     | 293 - 321     | °C   |
| Processing (Melt) Temp | 304 - 327     | °C   |
| Mold Temperature       | 82.2 - 121    | °C   |
| Injection Rate         | Moderate      |      |
| Back Pressure          | 0.345 - 0.689 | MPa  |

#### Injection instructions

Screw Speed: Medium 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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