

Polifil® PP GFRMPPCC-40

Polypropylene Impact Copolymer

The Plastics Group

Message:

Polifil® GFRMPPCC series compounds are high impact polypropylenes reinforced with chemically coupled glass fibers. This combination provides higher impact strength while retaining high stiffness. These compounds are used in appliances, electrical components, automotive, and utility products. Standard processing techniques are applicable. Use this information as a guide to aid you in selecting the proper resin for your application. TPG will custom compound and fine-tune our formulations for your application.

| General Information | | | |
|---|----------------------------------|-------------------|-------------|
| Filler / Reinforcement | Glass Fiber,40% Filler by Weight | | |
| Features | Chemically Coupled | | |
| | Good Stiffness | | |
| | High Impact Resistance | | |
| | Impact Copolymer | | |
| Uses | Appliances | | |
| | Automotive Applications | | |
| | Electrical Parts | | |
| Forms | Pellets | | |
| Processing Method | Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.22 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 4.0 to 10 | g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow (3.18 mm) | 0.30 | % | ASTM D955 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale) | 96 | | ASTM D785 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (23°C) | 4000 | MPa | ASTM D638 |
| Tensile Strength (23°C) | 86.2 | MPa | ASTM D638 |
| Tensile Elongation | | | ASTM D638 |
| Yield, 23°C | 3.0 | % | |
| Break, 23°C | 3.0 | % | |
| Flexural Modulus - Tangent (23°C) | 4830 | MPa | ASTM D790 |
| Flexural Strength (23°C) | 96.5 | MPa | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (23°C) | 160 | J/m | ASTM D256 |
| Gardner Impact (23°C, 12.7 mm) | 0.678 | J | ASTM D3029 |
| Thermal | Nominal Value | Unit | Test Method |

| Deflection Temperature Under Load | | ASTM D648 |
|-----------------------------------|----------------|-----------|
| 0.45 MPa, Unannealed | 152 | °C |
| 1.8 MPa, Unannealed | 146 | °C |
| Injection | Nominal Value | Unit |
| Drying Temperature | 82.2 to 104 | °C |
| Drying Time | 1.0 to 2.0 | hr |
| Rear Temperature | 210 to 221 | °C |
| Middle Temperature | 216 to 227 | °C |
| Front Temperature | 227 to 238 | °C |
| Nozzle Temperature | 227 to 249 | °C |
| Processing (Melt) Temp | 232 to 260 | °C |
| Mold Temperature | 48.9 to 65.6 | °C |
| Injection Rate | Fast | |
| Back Pressure | 0.172 to 0.517 | MPa |
| Screw Speed | 30 to 60 | rpm |

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