

Makrolon® M402 LF

 Covestro - Polycarbonates - *Polycarbonate*
General Information
Product Description

polycarbonate; MVR (300 °C/1.2 kg) 19 cm³/10 min; low viscosity; improved friction characteristics; biocompatible according to many ISO 10993-1 test requirements; available in opaque colors only; suitable for medical devices

General

| | | | |
|-------------------|------------------------|-----------------------------------|-----------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East | • Europe | • North America |
| | • Asia Pacific | • Latin America | |
| Features | • Biocompatible | • Low Friction | • Low Viscosity |
| Uses | • Medical Devices | | |
| | | • Medical/Healthcare Applications | |
| Agency Ratings | • ISO 10993-1 | • USP Class VI | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Colors Available | • Opaque | |
| Processing Method | • Injection Molding | | |
| ISO Designation | • PC | | |

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|------------------------|--------------|
| Density (73°F) | 1.20 | g/cm ³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 19 | cm ³ /10min | ISO 1133 |
| Molding Shrinkage ² | | | ISO 294-4 |
| Across Flow : 0.0787 in | 0.70 | % | |
| Flow : 0.0787 in | 0.70 | % | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (73°F) | 312000 | psi | ISO 527-1/1 |
| Tensile Stress (Yield, 73°F) | 8700 | psi | ISO 527-2/50 |
| Nominal Tensile Strain at Break (73°F) | > 50 | % | ISO 527-2/50 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact Strength ³ (73°F) | 29 | ft·lb/in ² | ISO 180/A |
| Thermal | Nominal Value | Unit | Test Method |
| Vicat Softening Temperature | 291 | °F | ISO 306/B120 |

Processing Information

| Injection | Nominal Value | Unit |
|------------------------------------|------------------|------|
| Drying Temperature - Dry Air Dryer | 248 | °F |
| Drying Time - Dry Air Dryer | 4.0 | hr |
| Suggested Max Moisture | < 0.020 | % |
| Suggested Shot Size | 30 to 70 | % |
| Rear Temperature | 482 to 518 | °F |
| Middle Temperature | 518 to 554 | °F |
| Front Temperature | 545 to 581 | °F |
| Nozzle Temperature | 518 to 581 | °F |
| Processing (Melt) Temp | 536 to 608 | °F |
| Mold Temperature | 158 to 230 | °F |
| Back Pressure | 1450 to 2900 | psi |
| Vent Depth | 9.8E-4 to 3.0E-3 | in |

Injection Notes


Standard Melt Temperature: 300°C
Peripheral Screw Speed: 0.05 - 0.2 m/s
Hold Pressure (% of Injection Pressure): 50 - 75%

Notes

¹ Typical properties: these are not to be construed as specifications.

² 60x60x2mm

³ 3.0 mm

