

ColorFast® PES-1000

Americhem - Polyethersulfone

General Information
Product Description

PES-1000F is an injection molding grade of transparent polyethersulfone (PESU) with high heat deflection and superior toughness.

General

| | | | |
|-------------------|------------------------|-----------------------------------|------------------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East | • Europe | • North America |
| | • Asia Pacific | • Latin America | |
| Features | • Biocompatible | • Excellent Colorability | |
| Uses | • Connectors | • Industrial Parts | • Surgical Instruments |
| | • Engineering Parts | • Medical/Healthcare Applications | |
| | • Housings | • Metal Replacement | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|----------|-------------|
| Density / Specific Gravity | 1.37 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (380°C/2.16 kg) | 30 | g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow (0.125 in) | 6.0E-3 | in/in | ASTM D955 |
| Water Absorption (24 hr) | 0.50 | % | ASTM D570 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength ² (Yield) | 12900 | psi | ASTM D638 |
| Tensile Elongation ² (Yield) | 6.5 | % | ASTM D638 |
| Flexural Modulus ² | 380000 | psi | ASTM D790 |
| Flexural Strength ² | 18000 | psi | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (73°F) | 10 | ft·lb/in | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (264 psi, Annealed) | 390 | °F | ASTM D648 |

Processing Information

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature | 266 to 302 | °F |
| Drying Time | 4.0 | hr |
| Processing (Melt) Temp | 644 to 734 | °F |
| Mold Temperature | 284 to 356 | °F |
| Injection Pressure | 508 to 1810 | psi |

Notes

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

² 2.0 in/min

