



Wednesday, August 30, 2023

PRL TP-FR-G15

Polymer Resources Ltd. - Polybutylene Terephthalate

Units

English ▼

| | |
|--|---------------------------------|
| Action | Legend (Open) |
|   | |

General Information

| | | | |
|------------------------|-------------------------------------|------------------------|----------------------|
| General | | | |
| Material Status | • Commercial: Active | | |
| Availability | • North America | | |
| Filler / Reinforcement | • Glass Fiber, 15% Filler by Weight | | |
| Additive | • Flame Retardant | | |
| Features | • Flame Retardant | • High Heat Resistance | • Self Extinguishing |
| RoHS Compliance | • RoHS Compliant | | |
| UL File Number | • E113219 | | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

ASTM & ISO Properties ¹

| | | | |
|---|------------------|----------|-------------|
| Physical | Nominal Value | Unit | Test Method |
| Density / Specific Gravity | 1.54 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (250°C/2.16 kg) | 10 to 20 | g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow (0.125 in) | 5.0E-3 to 9.0E-3 | in/in | ASTM D955 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength (Yield, 0.125 in) | 13500 | psi | ASTM D638 |
| Tensile Strength (Break, 0.125 in) | 13500 | psi | ASTM D638 |
| Flexural Modulus (0.125 in) | 725000 | psi | ASTM D790 |
| Flexural Strength (Break, 0.125 in) | 21000 | psi | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (73°F, 0.125 in) | 1.0 | ft-lb/in | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in) | 400 | °F | ASTM D648 |
| Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in) | 345 | °F | ASTM D648 |
| RTI Elec | | | UL 746B |
| 0.03 in | 266 | °F | |
| 0.06 in | 266 | °F | |
| 0.12 in | 266 | °F | |
| RTI Imp | | | UL 746B |
| 0.06 in | 248 | °F | |
| 0.12 in | 248 | °F | |
| RTI Str | | | UL 746B |
| 0.03 in | 266 | °F | |
| 0.06 in | 266 | °F | |
| 0.12 in | 266 | °F | |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | 1.0E+16 | ohms-cm | ASTM D257 |
| Dielectric Strength (0.0335 in) | 580 | V/mil | ASTM D149 |
| Arc Resistance (0.0335 in) | PLC 6 | | ASTM D495 |
| Comparative Tracking Index (CTI) (0.0335 in) | PLC 2 | | UL 746A |
| High Amp Arc Ignition (HAI) | | | UL 746A |
| 0.03 in | PLC 0 | | |
| 0.06 in | PLC 0 | | |
| 0.12 in | PLC 0 | | |
| High Voltage Arc Tracking Rate (HVTR) (0.0335 in) | PLC 3 | | UL 746A |
| Hot-wire Ignition (HWI) | | | UL 746A |

| | | | |
|--------------|---|---------------|------------------|
| 0.03 in | | PLC 4 | |
| 0.06 in | | PLC 3 | |
| 0.12 in | | PLC 2 | |
| Flammability | | Nominal Value | Unit Test Method |
| Flame Rating | | | UL 94 |
| 0.03 in | | V-0 | |
| 0.12 in | • | V-0 | |
| | • | 5VA | |

| | | | |
|------------------------|--|---------------|------|
| Processing Information | | | |
| Injection | | Nominal Value | Unit |
| Drying Temperature | | 240 to 250 | °F |
| Drying Time | | 3.0 to 4.0 | hr |
| Drying Time, Maximum | | 8.0 | hr |
| Rear Temperature | | 460 to 490 | °F |
| Middle Temperature | | 470 to 500 | °F |
| Front Temperature | | 480 to 510 | °F |
| Processing (Melt) Temp | | 475 to 525 | °F |
| Mold Temperature | | 160 to 190 | °F |

Notes

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

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