

Technical Data Sheet  
**PERLEX® R3510**  
Polycarbonate  
Engineering Plastics



| General                |                                     |  |  |
|------------------------|-------------------------------------|--|--|
| Filler / Reinforcement | • Glass Fiber, 10% Filler by Weight |  |  |
| Additive               | • Flame Retardant                   |  |  |
| Features               | • Flame Retardant                   |  |  |
| Uses                   | • Machine/Mechanical Parts          |  |  |

| Physical                                 | Nominal Value (English) | Nominal Value (SI) | Test Method |
|------------------------------------------|-------------------------|--------------------|-------------|
| Density                                  | 1.25 g/cm³              | 1.25 g/cm³         | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 10 g/10 min             | 10 g/10 min        | ISO 1133    |
| Molding Shrinkage                        |                         |                    |             |
| Across Flow                              | 0.50 %                  | 0.50 %             | ISO 294-4   |
| Flow                                     | 0.30 %                  | 0.30 %             |             |

| Mechanical       | Nominal Value (English) | Nominal Value (SI) | Test Method |
|------------------|-------------------------|--------------------|-------------|
| Tensile Modulus  | 587000 psi              | 4050 MPa           | ISO 527-2   |
| Tensile Stress   |                         |                    | ISO 527-2   |
| Yield            | 10900 psi               | 75.0 MPa           |             |
| Break            | 12000 psi               | 83.0 MPa           |             |
| Tensile Strain   |                         |                    | ISO 527-2   |
| Yield            | 5.0 %                   | 5.0 %              |             |
| Break            | 5.0 %                   | 5.0 %              |             |
| Flexural Modulus | 566000 psi              | 3900 MPa           | ISO 178     |
| Flexural Stress  | 19600 psi               | 135 MPa            | ISO 178     |

| Impact                                   | Nominal Value (English) | Nominal Value (SI) | Test Method |
|------------------------------------------|-------------------------|--------------------|-------------|
| Charpy Notched Impact Strength           |                         |                    | ISO 179     |
| -22°F (-30°C)                            | 2.9 ft·lb/in²           | 6.0 kJ/m²          |             |
| 73°F (23°C)                              | 2.9 ft·lb/in²           | 6.0 kJ/m²          |             |
| Charpy Unnotched Impact Strength         |                         |                    | ISO 179     |
| -22°F (-30°C)                            | 28 ft·lb/in²            | 58 kJ/m²           |             |
| 73°F (23°C)                              | 32 ft·lb/in²            | 68 kJ/m²           |             |
| Notched Izod Impact (Area) (73°F (23°C)) | 4.76 ft·lb/in²          | 10.0 kJ/m²         | ASTM D256   |

| Thermal                       | Nominal Value (English) | Nominal Value (SI) | Test Method |
|-------------------------------|-------------------------|--------------------|-------------|
| Heat Deflection Temperature   |                         |                    |             |
| 66 psi (0.45 MPa), Unannealed | 275 °F                  | 135 °C             | ISO 75-2/B  |
| 264 psi (1.8 MPa), Unannealed | 262 °F                  | 128 °C             | ISO 75-2/A  |
| Vicat Softening Temperature   |                         |                    |             |
| --                            | 306 °F                  | 152 °C             | ISO 306/A50 |
| --                            | 293 °F                  | 145 °C             | ISO 306/B50 |
| RTI Elec                      |                         |                    | UL 746      |
| 0.06 in (1.6 mm)              | 176 °F                  | 80.0 °C            |             |
| 0.13 in (3.2 mm)              | 176 °F                  | 80.0 °C            |             |
| RTI Imp                       |                         |                    | UL 746      |
| 0.06 in (1.6 mm)              | 176 °F                  | 80.0 °C            |             |
| 0.13 in (3.2 mm)              | 176 °F                  | 80.0 °C            |             |
| RTI Str                       |                         |                    | UL 746      |
| 0.06 in (1.6 mm)              | 176 °F                  | 80.0 °C            |             |
| 0.13 in (3.2 mm)              | 176 °F                  | 80.0 °C            |             |

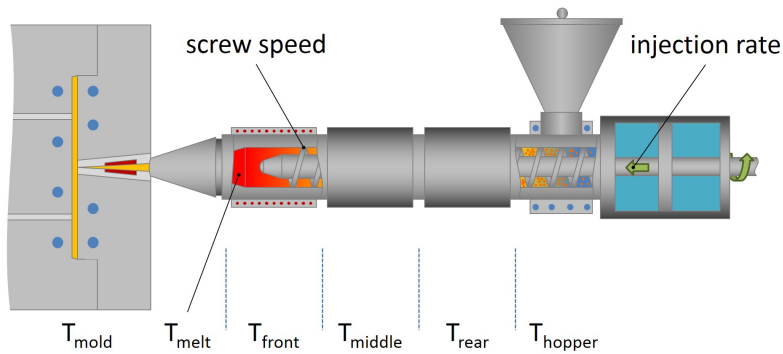




| Electrical                     | Nominal Value (English) | Nominal Value (SI) | Test Method    |
|--------------------------------|-------------------------|--------------------|----------------|
| Surface Resistivity            | > 1.0E+15 ohms          | > 1.0E+15 ohms     | IEC 60093      |
| Volume Resistivity             | > 1.0E+13 ohms·m        | > 1.0E+13 ohms·m   | IEC 62631-3-1  |
| Comparative Tracking Index     | 175 V                   | 175 V              | IEC 60112      |
| Flammability                   | Nominal Value (English) | Nominal Value (SI) | Test Method    |
| Burning Rate <sup>1</sup>      |                         |                    |                |
| 0.0787 in (2.00 mm)            | 0.0 in/min              | 0.0 mm/min         | ISO 3795       |
| 0.0787 in (2.00 mm)            | 0.0 in/min              | 0.0 mm/min         | FMVSS 302      |
| Flame Rating                   |                         |                    | UL 94          |
| 0.06 in (1.6 mm)               | V-0                     | V-0                |                |
| 0.13 in (3.2 mm)               | V-0                     | V-0                |                |
| Glow Wire Ignition Temperature |                         |                    | IEC 60695-2-13 |
| 0.04 in (1.0 mm)               | 1760 °F                 | 960 °C             |                |
| 0.08 in (2.0 mm)               | 1760 °F                 | 960 °C             |                |
| 0.12 in (3.0 mm)               | 1760 °F                 | 960 °C             |                |



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| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 230 to 248 °F           | 110 to 120 °C      |
| Drying Time            | 3.0 to 4.0 hr           | 3.0 to 4.0 hr      |
| Processing (Melt) Temp | 518 to 590 °F           | 270 to 310 °C      |
| Mold Temperature       | 122 to 176 °F           | 50 to 80 °C        |

**Notes**

<sup>1</sup> Self-Extinguishing

**Notes**

These are typical property values not to be construed as specification limits.

