

Technical Data Sheet  
**PERLEX® R221**  
Polycarbonate  
Engineering Plastics



| General                                  |                         |                    |                |
|------------------------------------------|-------------------------|--------------------|----------------|
| Features                                 | • Medium Flow           |                    |                |
| Uses                                     | • Electrical Parts      |                    |                |
| Physical                                 | Nominal Value (English) | Nominal Value (SI) | Test Method    |
| Density                                  | 1.20 g/cm³              | 1.20 g/cm³         | ISO 1183       |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 16 g/10 min             | 16 g/10 min        | ISO 1133       |
| Molding Shrinkage                        | 0.50 to 0.70 %          | 0.50 to 0.70 %     |                |
| Mechanical                               | Nominal Value (English) | Nominal Value (SI) | Test Method    |
| Tensile Modulus                          | 341000 psi              | 2350 MPa           | ISO 527-2      |
| Tensile Stress (Yield)                   | 8700 psi                | 60.0 MPa           | ISO 527-2      |
| Tensile Strain (Break)                   | 100 %                   | 100 %              | ISO 527-2      |
| Flexural Modulus                         | 334000 psi              | 2300 MPa           | ISO 178        |
| Flexural Stress                          | 13100 psi               | 90.0 MPa           | ISO 178        |
| Impact                                   | Nominal Value (English) | Nominal Value (SI) | Test Method    |
| Notched Izod Impact (Area) (73°F (23°C)) | 21.4 ft·lb/in²          | 45.0 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            | 257 °F                  | 125 °C             | ISO 75-2/A     |
| Vicat Softening Temperature              | 288 °F                  | 142 °C             | ISO 306/B50    |
| Flammability                             | Nominal Value (English) | Nominal Value (SI) | Test Method    |
| Burning Rate                             |                         |                    |                |
| 0.0787 in (2.00 mm)                      | < 3.9 in/min            | < 100 mm/min       | ISO 3795       |
| 0.0787 in (2.00 mm)                      | < 3.9 in/min            | < 100 mm/min       | FMVSS 302      |
| Flame Rating (0.06 in (1.6 mm))          | V-2                     | V-2                | UL 94          |
| Glow Wire Ignition Temperature           |                         |                    | IEC 60695-2-13 |
| 0.04 in (1.0 mm)                         | 1560 °F                 | 850 °C             |                |
| 0.08 in (2.0 mm)                         | 1560 °F                 | 850 °C             |                |
| 0.12 in (3.0 mm)                         | 1560 °F                 | 850 °C             |                |

**Notes**

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

