

## Technical Data Sheet

### *Perlex* R5563 CR01 WHITE 1-1165



Polycarbonate

#### Product Description

*Perlex* R5563 CR01 WHITE 1-1165 is a Polycarbonate material. Features include: UV Resistant.

|             |                                |
|-------------|--------------------------------|
| Attribute   | UV Resistant                   |
| Appearance  | Opaque                         |
| Additive    | Flame Retardant; UV Stabilizer |
| Application | Electrical Parts               |

| Typical Properties                                      | Nominal Value | Units             | Test Method |
|---------------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                         |               |                   |             |
| Melt Flow Rate, (300 °C/1.2 kg)                         | 12            | g/10 min          | ISO 1133    |
| Density                                                 | 1.2           | g/cm <sup>3</sup> | ISO 1183    |
| <b>Mechanical</b>                                       |               |                   |             |
| Tensile Stress at Yield                                 | 60            | MPa               | ISO 527-2   |
| Tensile Strain at Break                                 | >50           | %                 | ISO 527-2   |
| Flexural Modulus                                        | 2400          | MPa               | ISO 178     |
| Tensile Strain at Yield                                 | 5             | %                 | ISO 527-2   |
| Tensile Stress at Break                                 | 48            | MPa               | ISO 527-2   |
| Tensile Modulus                                         | 2300          | MPa               | ISO 527-1   |
| Flexural Stress                                         | 95            | MPa               | ISO 178     |
| <b>Impact</b>                                           |               |                   |             |
| Charpy Impact Strength - Notched                        |               |                   |             |
| (23 °C)                                                 | 47            | kJ/m <sup>2</sup> | ISO 179     |
| (-30 °C)                                                | 11            | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Impact Strength - Unnotched                      |               |                   |             |
| (-30 °C)                                                | No Break      |                   | ISO 179     |
| (23 °C)                                                 | No Break      |                   | ISO 179     |
| Notched Izod Impact (Area), (23 °C)                     | 45.0          | kJ/m <sup>2</sup> | ASTM D256   |
| <b>Thermal</b>                                          |               |                   |             |
| Vicat Softening Temperature                             |               |                   |             |
| (B (50N), 50 °C/h)                                      | 145           | °C                | ISO 306     |
| (A (10N), 50 °C/h)                                      | 150           | °C                | ISO 306     |
| Deflection Temperature Under Load Unannealed (0.45 MPa) | 135           | °C                | ISO 75-2/B  |
| Deflection Temperature Under Load Unannealed (1.80 MPa) | 130           | °C                | ISO 75-2/A  |

|          |      |    |         |
|----------|------|----|---------|
| RTI Elec |      |    |         |
| (1.5 mm) | 80.0 | °C | UL 746B |
| (3.0 mm) | 80.0 | °C | UL 746B |
| RTI Imp  |      |    |         |
| (1.5 mm) | 80.0 | °C | UL 746B |
| (3.0 mm) | 80.0 | °C | UL 746B |
| RTI Str  |      |    |         |
| (1.5 mm) | 80.0 | °C | UL 746B |
| (3.0 mm) | 80.0 | °C | UL 746B |

#### Electrical

|                                  |          |       |               |
|----------------------------------|----------|-------|---------------|
| Volume Resistivity               | >1.0E+13 | ohm*m | IEC 62631-3-1 |
| Comparative Tracking Index (CTI) | 175      | V     | IEC 60112     |
| High Amp Arc Ignition            |          |       | UL 746A       |
| Surface Resistivity              | >1.0E+15 | ohm   | IEC 60093     |

#### Flammable

|                                |     |        |                |
|--------------------------------|-----|--------|----------------|
| Hot-wire Ignition (HWI)        |     |        | UL 746A        |
| Burning Rate                   |     |        |                |
| (2.00 mm)                      | 0.0 | mm/min | FMVSS 302      |
| (2.00 mm)                      | 0.0 | mm/min | ISO 3795       |
| Glow Wire Flammability Index   |     |        |                |
| (1.5 mm)                       | 960 | °C     | IEC 60695-2-12 |
| (3.0 mm)                       | 960 | °C     | IEC 60695-2-12 |
| Glow Wire Ignition Temperature |     |        |                |
| (1.5 mm)                       | 850 | °C     | IEC 60695-2-13 |
| (3.0 mm)                       | 850 | °C     | IEC 60695-2-13 |

#### UL Information

|              |     |  |       |
|--------------|-----|--|-------|
| Flame Rating |     |  |       |
| (1.5 mm)     | V-0 |  | UL 94 |
| (3.0 mm)     | V-0 |  | UL 94 |

#### Injection Parameters

|                        | Nominal Value | Units |
|------------------------|---------------|-------|
| Drying Time            | 3.0 to 4.0    | hr    |
| Drying Temperature     | 110 to 120    | °C    |
| Processing (Melt) Temp | 270 to 310    | °C    |
| Mold Temperature       | 50 to 80      | °C    |