

# PRL PC-UV3-D(f1)

Polycarbonate  
Polymer Resources Ltd.

Message:

PRL PC-UV3-D(f1) is a Polycarbonate (PC) product. It can be processed by injection molding and is available in North America. Typical application: Outdoor Applications.

Characteristics include:

- Flame Rated
- RoHS Compliant
- Good UV Resistance
- Heat Resistant
- High Flow

| General Information                      |                        |          |             |
|------------------------------------------|------------------------|----------|-------------|
| UL YellowCard                            | E113219-101708538      |          |             |
| Additive                                 | UV Stabilizer          |          |             |
| Features                                 | General Purpose        |          |             |
|                                          | Good UV Resistance     |          |             |
|                                          | High Flow              |          |             |
|                                          | High Impact Resistance |          |             |
|                                          | Medium Heat Resistance |          |             |
|                                          | Self Extinguishing     |          |             |
| RoHS Compliance                          | RoHS Compliant         |          |             |
| UL File Number                           | E113219                |          |             |
| Forms                                    | Pellets                |          |             |
| Processing Method                        | Injection Molding      |          |             |
| Physical                                 | Nominal Value          | Unit     | Test Method |
| Specific Gravity                         | 1.20                   | g/cm³    | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 14 to 20               | g/10 min | ASTM D1238  |
| Molding Shrinkage - Flow (3.18 mm)       | 0.50 to 0.70           | %        | ASTM D955   |
| Outdoor Suitability                      | f1                     |          | UL 746C     |
| Hardness                                 | Nominal Value          | Unit     | Test Method |
| Rockwell Hardness                        |                        |          | ASTM D785   |
| M-Scale                                  | 70                     |          |             |
| R-Scale                                  | 118                    |          |             |
| Mechanical                               | Nominal Value          | Unit     | Test Method |
| Tensile Strength                         |                        |          | ASTM D638   |
| Yield, 3.18 mm                           | 62.1                   | MPa      |             |
| Break, 3.18 mm                           | 68.9                   | MPa      |             |
| Tensile Elongation                       |                        |          | ASTM D638   |
| Yield, 3.18 mm                           | 6.0                    | %        |             |

|                                                 |               |           |                         |
|-------------------------------------------------|---------------|-----------|-------------------------|
| Break, 3.18 mm                                  | 120           | %         |                         |
| Flexural Modulus (3.18 mm)                      | 2310          | MPa       | ASTM D790               |
| Flexural Strength (3.18 mm)                     | 95.8          | MPa       | ASTM D790               |
| Impact                                          | Nominal Value | Unit      | Test Method             |
| Notched Izod Impact (23°C, 3.18 mm)             | 690           | J/m       | ASTM D256               |
| Gardner Impact (3.18 mm)                        | > 36.2        | J         | ASTM D3029              |
| Thermal                                         | Nominal Value | Unit      | Test Method             |
| Deflection Temperature Under Load               |               |           | ASTM D648               |
| 0.45 MPa, Unannealed, 3.18 mm                   | 132           | °C        |                         |
| 1.8 MPa, Unannealed, 3.18 mm                    | 127           | °C        |                         |
| Vicat Softening Temperature                     | 149           | °C        | ASTM D1525 <sup>1</sup> |
| RTI Elec                                        |               |           | UL 746                  |
| 1.50 mm                                         | 120           | °C        |                         |
| 3.00 mm                                         | 120           | °C        |                         |
| RTI Imp                                         |               |           | UL 746                  |
| 1.50 mm                                         | 105           | °C        |                         |
| 3.00 mm                                         | 110           | °C        |                         |
| RTI Str                                         |               |           | UL 746                  |
| 1.50 mm                                         | 120           | °C        |                         |
| 3.00 mm                                         | 120           | °C        |                         |
| Electrical                                      | Nominal Value | Unit      | Test Method             |
| Volume Resistivity                              | 1.0E+15       | ohms · cm | ASTM D257               |
| Dielectric Strength (1.50 mm)                   | 12            | kV/mm     | ASTM D149               |
| Arc Resistance (1.50 mm)                        | PLC 5         |           | ASTM D495               |
| Comparative Tracking Index (CTI) (1.50 mm)      | PLC 3         |           | UL 746                  |
| High Amp Arc Ignition (HAI)                     |               |           | UL 746                  |
| 1.50 mm                                         | PLC 0         |           |                         |
| 3.00 mm                                         | PLC 0         |           |                         |
| High Voltage Arc Tracking Rate (HVTR) (1.50 mm) | PLC 2         |           | UL 746                  |
| Hot-wire Ignition (HWI)                         |               |           | UL 746                  |
| 1.50 mm                                         | PLC 2         |           |                         |
| 3.00 mm                                         | PLC 2         |           |                         |
| Flammability                                    | Nominal Value | Unit      | Test Method             |
| Flame Rating                                    |               |           | UL 94                   |
| 1.50 mm, ALL                                    | V-2           |           |                         |
| 3.00 mm, ALL                                    | V-2           |           |                         |
| Optical                                         | Nominal Value | Unit      | Test Method             |
| Transmittance (2540 µm)                         | 88.0          | %         | ASTM D1003              |
| Haze (2540 µm)                                  | 1.0           | %         | ASTM D1003              |
| Injection                                       | Nominal Value | Unit      |                         |
| Drying Temperature                              | 118 to 124    | °C        |                         |

|                        |              |    |
|------------------------|--------------|----|
| Drying Time            | 3.0 to 4.0   | hr |
| Drying Time, Maximum   | 8.0          | hr |
| Rear Temperature       | 260 to 282   | °C |
| Middle Temperature     | 271 to 293   | °C |
| Front Temperature      | 282 to 304   | °C |
| Processing (Melt) Temp | 288 to 316   | °C |
| Mold Temperature       | 71.1 to 93.3 | °C |

#### NOTE

1. Rate B (120°C/h), Loading 2 (50 N)

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

