

# PRL PPX-FR1-(color)-EN

Polyphenylene Ether + PS

Polymer Resources Ltd.

## Message:

PRL PPX-FR1-(color)-EN is a polyphenylene ether PS (PPE PS) product. It can be processed by extrusion and is available in North America.

Features include:

flame retardant/rated flame

ROHS certification

Flame Retardant

Halogen-free

Heat resistance

| General Information                       |                         |                   |             |
|-------------------------------------------|-------------------------|-------------------|-------------|
| UL YellowCard                             | E113219-219254          |                   |             |
| Additive                                  | Flame retardancy        |                   |             |
| Features                                  | Chlorine Free           |                   |             |
|                                           | Heat resistance, medium |                   |             |
|                                           | Bromine-free            |                   |             |
|                                           | Self-extinguishing      |                   |             |
|                                           | Flame retardancy        |                   |             |
| RoHS Compliance                           | RoHS compliance         |                   |             |
| UL File Number                            | E113219                 |                   |             |
| Forms                                     | Particle                |                   |             |
| Processing Method                         | Extrusion               |                   |             |
| Physical                                  | Nominal Value           | Unit              | Test Method |
| Specific Gravity                          | 1.08                    | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (250°C/11.6 kg) | 15 - 40                 | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow (3.18 mm)        | 0.50 - 0.70             | %                 | ASTM D955   |
| Hardness                                  | Nominal Value           | Unit              | Test Method |
| Rockwell Hardness (R-Scale)               | 113                     |                   | ASTM D785   |
| Mechanical                                | Nominal Value           | Unit              | Test Method |
| Tensile Strength                          |                         |                   | ASTM D638   |
| Yield, 3.18mm                             | 56.5                    | MPa               | ASTM D638   |
| Fracture, 3.18mm                          | 46.9                    | MPa               | ASTM D638   |
| Tensile Elongation (Break, 3.18 mm)       | 50                      | %                 | ASTM D638   |
| Flexural Modulus (3.18 mm)                | 2280                    | MPa               | ASTM D790   |
| Flexural Strength (3.18 mm)               | 89.6                    | MPa               | ASTM D790   |
| Impact                                    | Nominal Value           | Unit              | Test Method |
| Notched Izod Impact                       |                         |                   | ASTM D256   |
| -40°C, 3.18 mm                            | 160                     | J/m               | ASTM D256   |

| 23°C, 3.18 mm                                   | 370           | J/m     | ASTM D256   |
|-------------------------------------------------|---------------|---------|-------------|
| Dart Drop Impact (3.18 mm)                      | 16.9          | J       | ASTM D3029  |
| Thermal                                         | Nominal Value | Unit    | Test Method |
| Deflection Temperature Under Load               |               |         | ASTM D648   |
| 0.45 MPa, unannealed, 3.18mm                    | 87.8          | °C      | ASTM D648   |
| 1.8 MPa, unannealed, 3.18mm                     | 82.2          | °C      | ASTM D648   |
| RTI Elec                                        |               |         | UL 746      |
| 1.50 mm                                         | 110           | °C      | UL 746      |
| 1.70 mm                                         | 110           | °C      | UL 746      |
| 3.00 mm                                         | 110           | °C      | UL 746      |
| RTI Imp                                         |               |         | UL 746      |
| 1.50 mm                                         | 95.0          | °C      | UL 746      |
| 1.70 mm                                         | 95.0          | °C      | UL 746      |
| 3.00 mm                                         | 95.0          | °C      | UL 746      |
| RTI                                             |               |         | UL 746      |
| 1.50 mm                                         | 110           | °C      | UL 746      |
| 1.70 mm                                         | 110           | °C      | UL 746      |
| 3.00 mm                                         | 110           | °C      | UL 746      |
| Electrical                                      | Nominal Value | Unit    | Test Method |
| Volume Resistivity                              | 1.0E+17       | ohms·cm | ASTM D257   |
| Dielectric Strength                             | 22            | kV/mm   | ASTM D149   |
| Comparative Tracking Index (CTI) (1.50 mm)      | PLC 2         |         | UL 746      |
| High Amp Arc Ignition (HAI)                     |               |         | UL 746      |
| 1.50 mm                                         | PLC 1         |         | UL 746      |
| 1.70 mm                                         | PLC 1         |         | UL 746      |
| 3.00 mm                                         | PLC 1         |         | UL 746      |
| High Voltage Arc Tracking Rate (HVTR) (1.50 mm) | PLC 3         |         | UL 746      |
| Hot-wire Ignition (HWI)                         |               |         | UL 746      |
| 1.50 mm                                         | PLC 0         |         | UL 746      |
| 1.70 mm                                         | PLC 0         |         | UL 746      |
| 3.00 mm                                         | PLC 0         |         | UL 746      |
| Flammability                                    | Nominal Value | Unit    | Test Method |
| Flame Rating                                    |               |         | UL 94       |
| 1.50 mm, ALL                                    | V-0           |         | UL 94       |
| 1.70 mm, ALL                                    | V-0           |         | UL 94       |
| 3.00 mm, ALL                                    | V-0           |         | UL 94       |
| Extrusion                                       | Nominal Value | Unit    |             |
| Drying Temperature                              | 71.1 - 82.2   | °C      |             |
| Drying Time                                     | 3.0 - 4.0     | hr      |             |
| Cylinder Zone 1 Temp.                           | 171           | °C      |             |
| Cylinder Zone 2 Temp.                           | 188           | °C      |             |

|                       |           |    |
|-----------------------|-----------|----|
| Cylinder Zone 3 Temp. | 188       | °C |
| Melt Temperature      | 193 - 216 | °C |
| Die Temperature       | 204       | °C |

#### Extrusion instructions

Do not exceed 8 hours when drying.

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#### Recommended distributors for this material

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