

# PRL NY6-GP2

Polyamide 6  
Polymer Resources Ltd.

Message:

PRL NY6-GP2 is a Polyamide 6 (Nylon 6) product. It can be processed by injection molding and is available in North America.

Characteristics include:

Flame Rated  
RoHS Compliant  
Lubricated  
Nucleated

| General Information                 |                   |                   |             |
|-------------------------------------|-------------------|-------------------|-------------|
| UL YellowCard                       | E113219-219230    |                   |             |
| Additive                            | Lubricant         |                   |             |
|                                     | Nucleating Agent  |                   |             |
| Features                            | General Purpose   |                   |             |
|                                     | Lubricated        |                   |             |
|                                     | Nucleated         |                   |             |
| Uses                                | General Purpose   |                   |             |
| RoHS Compliance                     | RoHS Compliant    |                   |             |
| UL File Number                      | E113219           |                   |             |
| Forms                               | Pellets           |                   |             |
| Processing Method                   | Injection Molding |                   |             |
| Physical                            | Nominal Value     | Unit              | Test Method |
| Specific Gravity                    | 1.13              | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)  | 0.80 to 1.2       | %                 | ASTM D955   |
| Mechanical                          | Nominal Value     | Unit              | Test Method |
| Tensile Strength                    |                   |                   | ASTM D638   |
| Yield, 3.18 mm                      | 89.6              | MPa               |             |
| Break, 3.18 mm                      | 89.6              | MPa               |             |
| Flexural Modulus (3.18 mm)          | 3100              | MPa               | ASTM D790   |
| Flexural Strength (3.18 mm)         | 108               | MPa               | ASTM D790   |
| Impact                              | Nominal Value     | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.18 mm) | 53                | 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       | 191               | °C                |             |
| 1.8 MPa, Unannealed, 3.18 mm        | 73.9              | °C                |             |
| RTI Elec                            | UL 746            |                   |             |

|                                                  |               |           |             |
|--------------------------------------------------|---------------|-----------|-------------|
| 0.800 mm                                         | 125           | °C        |             |
| 1.50 mm                                          | 125           | °C        |             |
| 3.00 mm                                          | 125           | °C        |             |
| 6.00 mm                                          | 125           | °C        |             |
| RTI Imp                                          |               |           | UL 746      |
| 0.800 mm                                         | 65.0          | °C        |             |
| 1.50 mm                                          | 75.0          | °C        |             |
| 3.00 mm                                          | 75.0          | °C        |             |
| 6.00 mm                                          | 75.0          | °C        |             |
| RTI Str                                          |               |           | UL 746      |
| 0.800 mm                                         | 65.0          | °C        |             |
| 1.50 mm                                          | 85.0          | °C        |             |
| 3.00 mm                                          | 85.0          | °C        |             |
| 6.00 mm                                          | 85.0          | °C        |             |
| Electrical                                       | Nominal Value | Unit      | Test Method |
| Volume Resistivity                               | 1.0E+14       | ohms · cm | ASTM D257   |
| Dielectric Strength (0.800 mm)                   | 30            | kV/mm     | ASTM D149   |
| Comparative Tracking Index (CTI) (0.800 mm)      | PLC 0         |           | UL 746      |
| High Amp Arc Ignition (HAI)                      |               |           | UL 746      |
| 0.800 mm                                         | PLC 0         |           |             |
| 1.50 mm                                          | PLC 0         |           |             |
| 3.00 mm                                          | PLC 0         |           |             |
| 6.00 mm                                          | PLC 0         |           |             |
| High Voltage Arc Tracking Rate (HVTR) (0.800 mm) | PLC 1         |           | UL 746      |
| Hot-wire Ignition (HWI)                          |               |           | UL 746      |
| 0.800 mm                                         | PLC 4         |           |             |
| 1.50 mm                                          | PLC 4         |           |             |
| 3.00 mm                                          | PLC 3         |           |             |
| 6.00 mm                                          | PLC 2         |           |             |
| Flammability                                     | Nominal Value | Unit      | Test Method |
| Flame Rating                                     |               |           | UL 94       |
| 0.800 mm                                         | V-2           |           |             |
| 1.50 mm                                          | V-2           |           |             |
| 3.00 mm                                          | V-2           |           |             |
| 6.00 mm                                          | V-2           |           |             |
| Injection                                        | Nominal Value | Unit      |             |
| Drying Temperature                               | 73.9 to 85.0  | °C        |             |
| Drying Time                                      | 3.0 to 4.0    | hr        |             |
| Drying Time, Maximum                             | 8.0           | hr        |             |
| Rear Temperature                                 | 221 to 246    | °C        |             |
| Middle Temperature                               | 238 to 254    | °C        |             |

|                        |              |    |
|------------------------|--------------|----|
| Front Temperature      | 243 to 260   | °C |
| Processing (Melt) Temp | 238 to 279   | °C |
| Mold Temperature       | 79.4 to 93.3 | °C |

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